Transcript

of the

REA GENERAL STAFF CONFERENCE

Department of the Interior Auditorium

February 1-5, 1937

Washington, D. C.

February 1, 1937.

The Administrative General Staff Conference of the Rural Electrification Administration was held in the Interior Department Auditorium, Washington, D. C., Monday, February 1, to Friday, February 5, inclusive.

The first session was called to order at 9:00 a. m., Monday, February 1, by the Honorable John M. Carmody, Deputy Administrator, Chairman.

THE CHAIRMAN: About two months ago the Administrator suggested that another conference be held, similar to the conference that was held here last July, to get the field people in here so that we, in Washington, might know what their difficulties are and what their successes are, and how these successes are achieved. This is a good opportunity for an exchange of ideas,--perhaps opinions,--but I should like to think about ideas, because we have very real ideas and a method for reaching these objectives. In a moment the Administrator will talk to you and give you the keynote. We ought to profit by this exchange of ideas; we want to make the best of the time allotted to us here; we want to get results from the interchange of information and interchange of ideas. We ought to be perfectly frank but we ought not to be acrimonious. There are differences of opinion among us with respect to how things ought to be done. Let us lay them on the table objectively; let us be critical in a constructive way and let us learn of any policy changes that ought to be made in order to achieve our objectives in the line of progress. Let the discussion be free. I hope no one came down here with instructions from his chief to discuss only certain and particular problems. Each of us is a part of the whole organization and each of us ought not only to express his views, and to listen attentively, but we ought to be guided by the views of other people who know more about certain problems than we do. In the interest of clarity and for the record let us state our name and the name of our department for the reporter.

Now, Mr. Cooke, the keynote, if you please. Think of it! I am introducing the Administrator, who knows all of you and whom all of you know a great deal better than you know me.

MR. COOKE: Your Chairman is "pulling some stuff on me" this morning. He told me that he was going to give the keynote and that I would follow along, but I note that he has reversed the order of things. Now, I do not feel as good as I should this morning; in fact, I've already had an appointment with Dr. Person this morning. When I got up, the first thing I did was turn to the index of a Washington paper, and seeing that the REA was in no trouble, I went ahead with the news. This morning I could not find my glasses. After looking for them for ten minutes in different places around the house, I said to myself, "Now, there is something wrong here. You are losing your grip." I later found them in my toothbrush holder--which only goes to prove,------(Laughter).....

Dr. Barrows, one of my colleagues on the Mississippi Valley Committee, tells me that he discovered that the late President Coolidge always carried a mouth organ in his pocket. I have been trying to find out under what circumstances he used that mouth organ; all I can say is that if I had had a mouth organ this morning, I should have started to play it.

Seriously speaking, I think that we are at a most interesting stage of our development. We have finished our honeymoon and we are now approaching the period where we are asking ourselves why we are here and where we are going. There is always some anguish connected with that line of thought. You first discover what is wrong and sometimes make the mistake of thinking that there is more wrong than right with the things at hand. Some of the heads of the divisions have been foregathering recently; we have been having some heart-to-heart talks and I rather gather that the men in the field feel that we are not on our jobs. Only last week I received a memorandum from a man in the field who said, ".....this letter has been on your desk for ten days....." I asked Miss McKim if there ever were a time when I had anything on my desk for that length of time. Later I worked to the bottom of the pile of mail on my desk and did find another communication that had been on my desk for ten days.

Then, too, I note from some of your correspondence, the rosy pictures you paint; so I gather that there are links that we can pick up, both at home and abroad. In order that there may be no misunderstanding we are putting a complaint blank, in the form of a coupon, in the News this week to make it easy for people to complain. I think that the very first time an REA man or woman sees that blank he or she might think that the Administrator or Deputy Administrator and a few others are "laying down on them". That is not the idea, gentlemen.

I went into the city hall at Philadelphia some years ago to find some indications of gang rule and, believe me, that was some experience. There were thousands and thousands of complaints that rained in on us; so I said to the Mayor "Let us make them complain." We posted these complaint forms in numerous places throughout the town, and we received every conceivable sort of complaint. Then we offered a number of prizes to the policemen who brought in the best sort of complaints. In less than six months we received around 100,000 complaints. Then we began to receive letters of commendation. I shall never forget the day when someone came in and showed me a letter of praise. It was around one of the holidays, either Thanksgiving or Christmas; so we offered the largest turkey to the person responsible for the nicest letter of commendation that was received.

Now, gentlemen, this is what is going to happen on this complaint blank. We are going to find out just what most people think we are. I think we are better than most people think we are, and, also, I think we are "punk" in some respects. Nobody can be 100 percent at every point; but just let us find out how good we are and I predict that within the next few months--the period within which our roofs were somewhat leaky will end and the roofs will again become tight and we shall go ahead to the next turn of duty.

I went over to Baltimore a few weeks ago and gave a talk which has been mimeographed and circularized, under the title of "Rural Electrification in Spite of the Experts" and I want to ask you to read it and tell me what you think of it. I really did not write it, so I can say some nice things about it. In that talk we tried to illustrate the idea that, if we had listened to everybody who talked to us before we started, we should never have gotten started. All the different reasons these experts gave us of why it should not be done! And we simply, in that little talk, tried to pick out four or five little things where these experts were absolutely wrong, and we demonstrated that we were pretty nearly absolutely right. Now we have been connected with a good many of these forlorn hopes; a good many things looked pretty flimsy at the start, but, thank God, a good many of them have come through; so it does not worry me when people throw stones.

But I think it is very important that you men and women who are carrying this REA banner get that point of view; try to be charitable to the people who believe we are doing something that cannot be done, but do not waste too much time arguing it out with them.

I was connected in the early stages of my career with scientific management. A number of people approached me and asked me to tell them in a word what "scientific management" was. I met a professor at Harvard who was trying to give a course of lectures on the subject and even he had a hard time explaining it. Finally, it sort of arrived on a world-wide scale and in the last ten or fifteen years I have not been trying to do any proselyting. It was not necessary.

Now, we have not achieved our objective. We are far from it, but I, personally, have more confidence in it every day. What we are accomplishing is not an easy task. We are gradually stealing up on an objective that is the greatest positive movement in this country. You certainly have heard of it,--certainly within the last few days the flood situation has confirmed our belief,--and unless we go ahead the dream of Jamestown stops. It will not stop for you, but for your children and your grandchildren. Now what I want you to do--you individuals, you lawyers, you engineers and you economists--is to do your part and don't have too much anxiety about what the other fellow is doing.

I am going down to the Department of Agriculture, at the invitation of the Secretary, to talk to a group on the question of load building. We have got to teach the farmers and the farmers' wives how to use electricity, but it is not up to the farmers or to their wives to use it. Broadly speaking, electricity has its foot in the door here and there, but we are still in the "horse and plow" stage.

It is our job to so visualize the actualities of the oncoming electrical age that we make the implement makers get busy. Now you cannot build a load unless the rates are right, so we have to influence the people to bring the rates down. If you have any imagination you can demonstrate, by the things that are being done in other fields, that it also can be done here. Now, don't tremble about it. Tremble about your own problems. There is going to be very little trembling because I am convinced that we are doing one of the finest things that is being done in the United States today.

When we started out you will remember that we held three meetings within a week--that was when Mr. Taylor was the administrator. By the way, did you all know that Mr. Taylor was appointed administrator at that time--and he was a mighty good one while it lasted. Now while he was administrator and I was working for him, we held three meetings in a week. The first meeting was with the Tycoons--the power boys, and the

presidents of the operating companies--which were fifteen or eighteen in number. It was a very secretive meeting. I tried to serve notice on them that we would "strike four bells" and that they had better meet us. They asked for $73,000,000.

The next meeting was with the municipalities. I thought, there was our chance. I did think that we were going to be able to do business with the municipalities, but they turned out to be more difficult to do business with than the private companies.

Then, God leading us and Boyd Fisher helping, we called a meeting of the co-ops and there we began to see daylight. The co-ops have been our help in our time of great need, as you know, so today we are going ahead with the co-ops. It is not necessary to know whether we are going to have co-ops fifty years from now but we certainly are heading that way. We do not have to look too far into the future of the functions of the co-ops. We are doing business with them today and they seem to be a God-sent agency which makes it possible for us--the REA--to "do its stuff".

I am no glassy-eyed banker lending money to these people, because if that is all we need, the other lending agencies would be enough, but Congress decided that that would not be enough. They did not want any grants made. Mind you, they gave us $100,000,000 in the same legislation that made it possible to make grants to cities for undertakings and activities of other kinds. It was not contemplated to make grants to these people in the country. These people did not want charity on one side and the glassy-eyed banker on the other; they wanted the REA to come in between--in a cooperative and friendly way; and that is the purpose of this meeting. These agencies we have set up--we want to make them feel that REA is going to back them to the limit of the law, and in return for that, we want them to back us, so that we in turn can make a worthy showing of the trust that is ours.

Some time ago I read the life of Robert Owen, but, frankly, I know almost nothing about co-ops and I do not believe that anybody knows as much about the subject, relatively speaking, as they might know. It is a philosophy of life that has to be worked out. Let us not think that because we are doing business with the co-ops that we are doing business with a hostile utility of some kind. The relationship should be entirely friendly. It is our feeling that the reverse currents will come in and the co-ops will be friendly to us.

We have got to set a goal for REA and each individual co-op with whom we do business. Don't let us make the mistake of being unduly influenced by the mistakes we have made in the past, or that we are making today. The first money that we lent was out of emergency funds. Congress intended these funds to be spent. They first gave us a hundred million dollars; if we had been allowed to keep that hundred million dollars we should have been sunk. If we had tried to spend that one hundred million dollars, we should have had to be so loose in our technique that REA would have been discredited. At the famous meeting at Hyde Park our friend Harry Hopkins gathered in all the chips and left us with ten million dollars. From that time on we were a negligible agency, as far as relief was concerned, and we were given the opportunity to think this thing out on a reasonable business-like basis, on a cooperative basis and on a workable basis, so that we could make the proper impression in the Congressional hearings in connection with this ten-year program. You know, President Wilson once said that an optimist was a man who could see an opportunity in every lemon that is handed to him. We saw our opportunity in that case and we have been cashing in on it ever since.

Now I have already talked longer than I intended to, but I want to leave this thought with you: Don't worry too much about others in your own job. I have been receiving so many communications from people who tell me about something entirely out of their sphere of duty--about what is going on. I do not want to erect any bulkheads so that you cannot come and tell us what you want to tell us about things that are going wrong, but the success of this organization is going to be built out of two things: (1) Each man and woman making an effort to do his or her part--or job--in the best possible way, and that includes cooperation with your colleagues; (2) The other thing is to get into our activities all of the support and cooperation that we today individually and collectively are able to render, but do not be glassy-eyed; treat these people out in the rural districts as friends and then, I am sure, they will treat you in like manner, and, between us, I am sure we shall get from Congress everything we ought to have.

I know that under Mr. Carmody's guidance and cooperation this is going to be the most useful meeting the REA has ever had.

THE CHAIRMAN: When I hear a talk like that--that is not only genuinely inspirational but factual--I think that the best thing we could do in the next hour or two is to go into our

rooms and think about it, privately. I cannot think of anything that is better disposed to give us the route that we ought to follow here in the next few days.

(Discussion off the record at this point)

THE CHAIRMAN: The important thing will be the discussions here. It is necessary to state certain problems and to give certain information, but the important result, if there will be any, will come out of the discussion of these topics. Let us remember that we shall be here three or four days; that it is unnecessary to discuss every phase of everything that comes to our mind this morning. Let us address ourselves to the particular subject in question until we exhaust it.

The first speaker is Mr. Foster Adams, and the topic given him is "What Our Program Means to Industry." Mr. Adams.

MR. ADAMS: After such a vital speech, and vital remarks, figures and facts about materials that we are using every day in our program may seem to you a little bit humdrum.

Industry has benefited greatly from the REA program. To industry, federal participation in rural electrification has meant: first, increased sales; second, more men employed and larger payrolls; third, increased profits.

In 1933, when plans for a rural electrification program were first being considered, construction of all kinds in the utility industry had dropped from $960,000,000 in 1930 to $180,000,000. In many States, not a mile of rural line was built. Sales curves had fallen so low that despondent managements were hanging them upside down or turning them to the wall. Manufacturers of electric equipment, contractors and operating companies were laying off men by the tens of thousands. Profit margins disappeared, and the red ink of nerve shattering deficits replaced complacent surpluses of previous years.

The National Recovery Program of the Roosevelt administration, with its emphasis on the great social value of electric power, has sent business curves surging upward again. Construction in the electric light and power industry rose to $330,000,000 in 1935, and in 1936 it exceeded half a billion dollars. Rural electrification contributed substantially to these totals.

One of the great manufacturers of electric equipment whose losses have disappeared and whose sales and profits have risen sharply in recent months is the Westinghouse Electric and Manufacturing Company. Its president, Mr. F. A. Merrick, states that rural electrification will open up a one billion dollar market for the electrical industries over the next decade. Citing the nature of the market, Mr. Merrick said: "This includes equipment used in the construction of the new rural lines, the sale of appliances and the sale of electric farm equipment for the use of electric power to the greatest advantage." He asserted that over two million farms will have service by 1947. The foregoing gives us a clue as to what our industrial leaders think the program of rural electrification will mean to them--a billion dollar market.

The Wall Street Journal, which has not been noteworthy for its advocacy of Government participation in power matters, recently surveyed the progress of the copper industry. It estimated that during 1936 the consumption of copper has increased 15 million pounds more than in any previous year--an increase of 32 percent over 1935. Copper fabricators are operating at about 95 percent of capacity with many plants running three 8-hour shifts. I quote the Journal: "The construction of electrification projects in the rural areas through the Rural Electrification Administration is credited with much of the increase."

There are three steps in rural electrification which directly stimulate industry. The first step is the construction of the rural lines and services themselves. The second step is the wiring of the customers' premises, and the third step is the acquisition by the customer of electrical appliances and equipment. The REA is vitally concerned with each step and the extent to which industry and the farmer will benefit depends directly upon REA policies and the way in which they are carried out. For example: an adequate wiring job as opposed to a skimpy job will use more and better materials. Once the adequate wiring job is done, industry and the farmer will both stand to gain once more by the fact that it will be easy for the farmer to use substantial appliances and equipment.

Because of the fact that REA itself does not build rural lines (employing its own labor and purchasing the necessary materials) it has at all times been difficult to secure accurate and timely data relating to the labor and materials used in line construction. For such performance records we are dependent upon each applicant, and it is reported that on only one project--Iowa-6-Dallas--have all the essential records

been filed with the REA. You will recall that Iowa-6-Dallas serves a resettlement project. Because of its small size and its heavy density, this REA project is not typical--customers averaged about twenty-five to the mile. It is unfortunate that the one REA project on which adequate records are available should be so unrepresentative.

A study which the Engineering Division recently made of all REA construction contracts showed the following breakdown of costs of rural line construction. Now I have here a chart (referring to large chart on the platform). This chart was made from a study by the Engineering Division of the construction contracts themselves. From it you will note how the Rural Electrification Dollar is broken down when it is finally spent. I have here another chart, which is too small for you to see, but which is the same type of chart as the big one. This also was prepared by the Engineering Division and was printed in the Rural Electrification News of November 1935; the data shown on the big chart was compiled about a year later. There are certain differences in these two charts. For example: hardware and insulators then show 8 percent, and they are still 8 percent. Direct wages, which were then 29 percent, are down now to 24 percent. Transformers, which were 23 percent, are down now to 17.6 percent. Conductors, which is the biggest segment, are now 26.7 percent, and were then 13 percent. Many factors which have influenced those changes will occur to you, and I think it will be interesting to have the engineers outline them in some detail.

Analyses have recently been made of construction contracts on four different REA projects. An analysis has also been made on the bid on the first section of Indiana-6-Boone and the actual construction costs of this section. Poles, pole top assemblies, conductors, services, total transforming cost, meters and sockets, overbuilding, clearing and trimming are all shown separately. These analyses are principally of interest in showing wide variations in the costs of some of the same operations. If we were to speculate boldly on how much the rural line building alone would mean to industry in 1937, we might work with the following rough figures: Under favorable circumstances, the REA projects constructed this year will total about $35,000,000. This will be augmented by about $30,000,000 of private utility construction which will bring the total for the year to around $65,000,000. Approximately $46,000,000 of this total will be spent for poles, transformers, meters, conductors, hardware, etc.

There is little evidence available upon which to base estimates of the second step,--the wiring of rural premises. Apparently, the number of answers to the question, "How much does it cost on the average to wire a rural premise?", is limited only by the number of people to whom you can put the question. Through the Edison Electric Institute, the utilities recently went on record by stating that the average cost of wiring to new customers along their rural lines was $69. There is a figure which may well be questioned! In another issue this year of the Edison Electric Institute, E. A. Brand, Commercial Engineer of the Niagara Hudson Power Corporation, stated the results of two recent investigations of the costs of farm wiring and equipment. One on the west Coast and one in Massachusetts indicate that for a 600 kilowatt-hour per year customer, wiring alone may average from $100 to $112.50. For a 2,000 kilowatt-hour per year customer, the costs may average from $170 to $325. Examples were cited where wiring costs have exceeded $900. After surveying a number of rural wiring jobs in Minnesota, an REA representative specializing in wiring ventured the estimate of "around $125. In Iowa, the management of one of our projects solicited bids for the wiring of three farms which were typical in the project area. The low bids on the three jobs ranged from $173 to $192. (Eastern Iowa Light & Power--a cooperative).

A middle figure for wiring appears to be about $125. The rural lines which may be built this year with public and private funds will be designed to serve over 200,000 new rural customers. The wiring of these rural homes will mean an investment of about $25,000,000--approximately half of which will go for wiring materials. (Incidentally, it may interest you to know that a recent court decision in a patent case indicates that a monopoly control of insulated wire may be broken and the cost of such wire slashed.)

Before considering in detail the third step,--the appliance business which industry may secure from these new rural lines,--let me briefly review what the recovery program and the focusing of the public mind on the advantages of an abundant use of electricity have done for the electric appliance industry. Let us see how much improvement this has brought to the electric appliance industry. In dollar value--and using only those appliances for which data were available in each year--sales in 1932 which were $790,000,000 increased to $2,017,000,000--over two-and-a-half times the 1932 total.

Major appliances increased even more, as will be seen from the following figures:

PRODUCT	1932 NUMBER SOLD	1932 RETAIL VALUE	1936 NUMBER SOLD	1936 RETAIL VALUE	VALUE 1936 IS TO 1932 (%)
Vacuum Cleaners (Floor type)	447,056	$17,882,240	$1,146,151	$62,178,692	347.7
Radios	2,620,000	124,860,000	8,825,000	503,025,000	402.9
Ranges	60,000	9,000,000	318,000	41,413,140	460.1
Refrigerators	798,000	155,610,000	2,000,000	328,000,000	201.8
Washing Machines	569,830	33,619,970	1,533,300	101,259,132	301.2

Now the question arises as to how much equipment can the farmer use on these rural lines with benefit to himself and to his family. The ultimate answer no one knows, for new appliances are being invented for new uses of electricity, and improved appliances are being developed to provide improved performance in doing old tasks. When an answer is sought as to the extent of the volume of appliance sales in the near future, wide variations are found. There are farms in many parts of the country which use from $500 to $2,500 worth of electric appliances and equipment. Some of these are show places, and they cannot be considered as typical. Indicative of what can be done in a relatively short time, I cite the following figures covering four projects in three Southern States during the first five to ten months of their operation:

	Percent Farms	Months of Operation as of 12/31/36	KWH Consumption Per Farm 12/36	Percent Saturation 12/1/36 Refrigerator	Range	Water Heater
Monroe Co., Miss.	75	10	67	50	7	1
Meigs Co., Tenn.	86	5	42	25	9	3
Duck River Corp., near Franklin Co., Tenn.	100	7	61	27	13	2
Cullman Co., Ala.	100	5	32	14	3	1

Critics will say "Yes, but these projects have the advantage of low TVA rates." They will not direct your attention to the offsetting factor of the relatively low purchasing power in the project areas. It seems to me that the Monroe County project presents a challenge to the REA to achieve a 50 percent refrigerator saturation on its lines by the end of the first year of their operation.

Appliance sales for the 200,000 new rural customers that we were considering a few months ago, should exceed $25,000,000--without including the plumbing fixtures and equipment which many farmers will install. This estimate is based upon a conservative figure, $125 per customer. The recent survey of the industry resulted in an estimated average figure of $141.

Agricultural machinery may itself undergo considerable modification in gearing it to electric power.

A talk, filled as this has been with many percentages and a seemingly endless dull procession of figures, provides about the usual type of answer to the question of what a lending program for construction means to industry.

Are you ready to explore a few new avenues of thought and suggestion with me? What different approaches to industry might the REA program have?

Instead of piecemeal purchasing of untested equipment in a haphazard way by each unguided and unwary customer on our new lines, our new customers might profit by having the REA staff give thought to the following transaction. When the Public Works Administration went into a large scale housing program, some members of their staff did some quiet planning. They decided to equip all the kitchens of some of the housing projects with electric refrigerators and electric ranges. Their technicians worked out in complete detail what they thought the specifications should be for these ranges and refrigerators, and then they called a conference at which the management of each manufacturer of this equipment was permitted to send one--and only one--representative. This conference took up each individual specification and thoroughly discussed its merits and drawbacks. When objections were raised, they were thoroughly investigated, and it was often found that the objector's own plant was not equipped to meet the specification under fire. In rough figures subject to later refinement, the following were the results of this thorough-going conference: Bids were finally let for 17,000 refrigerators, but initial price was not the only consideration--performance and economy were given weight. The bids were to be

submitted on the basis of the cost of the unit plus operating costs at one cent per kilowatt-hour over a ten-year period. Westinghouse was the successful bidder, having guaranteed a consumption not to exceed 1.32 kilowatt-hours per 24 hours. They are reported to have bid about $67 for each unit, which was $5 more than another manufacturer bid, but Westinghouse was the successful bidder, because the consumption guaranteed by the other manufacturer was about 1.6 kilowatt-hours. Under the terms of the award, refrigerators were taken out of the first 5,000 built and sent to the Bureau of Standards for testing. If their consumption turned out to be in excess of the guarantee, the difference between the guaranteed kilowatt-hour consumption and the tested consumption was to be multiplied by one cent per kilowatt-hour for the number of kilowatt-hours in ten years. That in turn was to be multiplied by 17,000, the number of refrigerators, and the answer deducted from the contract price. This daring innovation of the PWA has resulted in securing unusually low-priced refrigerators of tested quality and tested performance, and the consumers who dwell in the Government housing during the next ten years will profit from the courage and foresight of the Government's technicians. I understand that the electric ranges were purchased upon a similar plan. In a few days I shall have the exact details of these transactions and shall be glad to make them available for reference.

Another possibility which we might explore would be mass purchasing of materials for our rural line construction. Today, each contractor or each borrower is buying. When we have two hundred projects under construction, we shall have two hundred buyers in the market placing their orders "hit-or-miss" and running up the price on each other of needed materials and equipment.

The War Department is reported to have surveyed this country's industrial establishments and has planned for allotted orders and allotted production under planned control during the next war. A careful inquiry by REA would determine the capacity of different plants for pole treatment, of different fabricators for transformer manufacturer of sundry copper companies for turning out wire conductor and of the aluminum industry for making aluminum wire.

The employment provided for a given amount of production could then be determined and a survey made of the availability of a trained labor supply for each complete operation. After determining the amount of line to be built in a given year, REA might then assign production quotas to different companies.

By considering employment conditions and prices in determining its annual rural lines budget and in placing its allotments for supplies, costs might be kept under control and employment furnished where it was most needed. The national economy, and the farmer at the end of the new spur line, might both benefit from such a program.

If costs are to be kept within bounds, serious and intelligent thought must be given to their control. Most construction costs are moving up. The Engineering News-Record construction index number moved up 10 percent in 1936, and is higher this month than last. With the volume of data flowing into REA, we should have a rural lines construction index which would provide an accurate guide to rural lines costs. With so much statistical work carried on by so many parts of REA, perhaps an existing index will be found buried deep in the files of some operating section!

The cooperative aspects of our program are of great interest to industry. Perhaps "interest" is too mild a word. Concern and curiosity emerge on every side. How effective will cooperatives be in placing electric equipment on the new lines? Cooperatives have had a substantial growth in recent years. They have been thrust into prominence by the friendly treatment of the national administration. Westinghouse is reported to be using one of our cooperatives as an experimental ground. General Electric has made overtures to another--meanwhile keeping a nervous eye upon its established dealer relationships. Manufacturers, jobbers, dealers, retailers, co-ops, chain stores and mail order houses have all sensed the promise of a great volume of new business, and are scrambling madly for the dollars of REA borrowers and their customers. The careful student may soon sense new developments in methods and techniques of distribution. What part will this organization play in shaping these developments?

Many other challenging ideas--too numerous to mention--have been coming to your attention in the months which we have invested in this program of REA. In closing, may I direct your attention to the contribution which REA is making to forces which are in conflict--one set influencing the United States toward decentralization--the other set forcing the nation toward increased centralization. The encouragement which electricity in rural areas gives to the reestablishment of small rural industry is well known. The establishment of electric cooperatives is itself an important move toward decentralization. Conversely, by increasing the use of the radio in rural areas, REA is building up new markets for nationally-advertised products manufactured

by our great corporations. The demand for nationally-advertised products, coming for the first time from many rural areas which have received electrification, has aroused widespread interest, and it is reported that one of our large broadcasting companies is considering the advantages of making a field study of the significance of this development. The ultimate value and significance of our program to industry is for the future to determine. Already the REA has meant increasing sales, larger payrolls and improving profits. Ahead of us is the billion dollar market.

THE CHAIRMAN: Apart from the broad picture of industrial participation in this great program that Mr. Adams referred to, apart from the social implications, and also apart from this question of group buying and annual budgeting of purchases in cooperation with legitimate vendors, we have the narrower question of how these costs have changed from where these costs were reported one and a half years ago. Do you care to say a word, Mr. Adams, about the change in conductor costs?

MR. ADAMS: I should like to hear from the engineers on that, Mr. Chairman.

MR. HERRING: Do the figures you have just quoted come from Engineering?

MR. ADAMS: These figures were taken from a compilation made by the Engineering Division from the construction contracts up to last fall. In other words, the figures were taken from the contracts let.

COLONEL SASS: I understand that you represented these figures as being very recent figures, Mr. Adams. That information was called for on very short notice, and I was not told what it was to be used for. We took figures that we had, representing contracts or estimates in Ohio in the earlier period of last year, where the materials and labor were separated. From this we could get some idea as to the various proportions of materials used. At the present time the contractors do not show the labor and materials costs separately; the material and labor costs are all together. These figures therefore are not recent figures. The conductors in most cases may represent costs for clearing, and labor, as well as the contractor's profit, and cannot be separated. It all depends upon the method the contractors wish to use. The contractor may increase his costs on some particular control items in order to make his bid more competitive and thus make it easier for him to compete with another contractor. So I doubt very much whether these figures therefore give a true picture of the situation as it is today.

MR. HERRING: The figures just given were based upon estimates, and the conductor costs there were the costs of the materials, not the costs in place. If these figures include any other costs, it will be reflected in the labor cost. Approximately 5 or 6 percent of the labor cost is represented in stringing the wires. That increase in conductor costs might be due to increased costs in the materials. I remember a year ago copper was around nine cents; today it is thirteen cents; so there is a very material difference in copper costs, and copper costs represent something like 50 percent in our conductors. This figure on transformers is based on actual cost, and it might be 1 percent or 1-1/2 percent down. I do not remember the figure on poles.

MR. ADAMS: Seventeen cents.

MR. HERRING: Now it is 19-1/2 cents.

MR. TAYLOR: I think the original chart is based on a single-phase line, two wires. This, undoubtedly, has a four-phase line. Your pole costs, in poles, will be the same, but your percentage there will be lower.

MR. HERRING: I should like, myself, to know the difference in the percentage costs of conductors.

MR. ADAMS: Do you consider these figures as being typical of the program, Mr. Herring? I should like to know in what way they should be changed, if they are not typical.

MR. HERRING: Your labor cost is too low, for some reason. It should be around 30 percent. You may have included the conductor costs in some of the labor costs.

MR. ADAMS: Would you not then have a change in insulators and hardware, if your labor costs entered into that?

MR. HERRING: Hardly.

THE CHAIRMAN: We cannot do anything with this now. We are talking about different things. The thing to do now with this is for Mr. Adams and whomever Mr. Herring designates in the Engineering Division to get together and ascertain the accurate figures. To me, this represents one of the very real reasons why these various kinds of conferences are necessary from time to time. We must have a clearer understanding among ourselves of what we are doing, why we are doing it, and what we are doing it with. I think we shall find, on this business of statistics,

that we shall perhaps start out with a statistical committee whose business it will be to let these statistics out to those who want them. Now, operating people need live statistics. I have spent most of my life as an operating man and I have not been able to operate intelligently without accurate, complete and final figures. That is the basis on which we ought to assemble our statistics and the basis on which we ought to use them. This is a typical example of what is happening all the time--we are comparing two different things. I shall ask Mr. Adams if he and one of Mr. Herring's men will not sit down and work out accurate and final figures. I think, before we get through, we ought to go on with Mr. Adams to explore this group purchasing, but I do not think we shall do it at this stage of the conference. Let us first develop a little the total purchases that are actually being made. We shall come to that, perhaps, Wednesday, let us say. Now let us go on with this definite program. This conference is for the field people largely and designed to enable them to give us information and, in turn, enable us to give them information they might need. We shall now hear from Mr. Falkenwald, who will present to us, "The Latest Practice of Developing a Project".

MR. FALKENWALD: It is rather difficult to say just how a project should or should not be developed because there are no two men who work exactly alike in the field. Then, again, we very seldom deal with the same types of people, and we do cover a lot of territory, as you know. I have been trying to develop not one county but ten different counties in a State at the same time. This is how we work. We know that it will take, approximately, a couple of weeks to develop a single county project, so if a field man calls on a certain county group and then has to wait another two weeks or more, in order to finish his development job, you can readily see that he has ample time to do things which you, working only on one project might not be able to accomplish. Now then, regardless of the opinion that any of you may form of me during my following remarks, please remember that we still have some gentlemen in the development field who do not necessarily follow my plan of action.

When I get an order from Mr. Fisher to go into a certain State, he really means that I go out there and do the job, and if I get into any kind of trouble--well, it is just too bad. I get data from our files showing how many farms are now being supplied with electricity in the various counties of that State, what the percentages are, and how many farmers have the service in any one specific area. I then mark on the State map the locations of the municipal utilities in the State. I find out whether or not the utility has been fighting them and

whether or not they are fighting the REA and the farmers. I usually try to locate the most prominent person in that area, and my first choice is a promoter, because if we have a good promoter in a given territory, we can accomplish twice as much work as we could do otherwise. However, in sections where we can find no promoter who is actually sincere and on the "up-and-up" I call a meeting of the farm leaders. These farm leaders will locate the best counties in the State for our development purpose and say whether or not the people in those particular counties would be interested in the service, and also whether or not they think I should go through with the REA program. It generally ends up with the farm leaders thinking that REA is a good idea, but that it would take two or three years to get the rural electrification started, and that it is best after all to go to the utilities for service. By that time I have secured sufficient data from the farm leaders. If the counties they recommend are nowhere near a municipal plant I find out whether or not I could develop them into projects. As you probably know, we have a most difficult time getting a real wholesale rate from the utilities and municipalities. Incidentally, in such counties we generally step into a newspaper office and tell the reporters that we are going to give them a "break" and suggest that they keep in touch with us. We usually tell our story over the radio and ask the newspapers to give us as much publicity as possible. We then call on the county agent--sometimes it is the Farm Bureau president--and explain our program to him. He usually gives us a "line" that he is pretty busy, but we do not "let on". We ask him to give the matter his immediate consideration and tell him that we should like to have him on the program; that we are getting plenty of publicity, and all that sort of thing. However, we tell him that his name on the program is not compulsory; but if he does not come across I tell him that we will notify the farmers that he does not care to cooperate, and that warning seems to have the proper effect; they usually respond about that time. Sometimes we even have to do things that we are advised not to do under any other circumstances. We tell the county agent that he absolutely must have a large crowd present at our proposed meeting, because if he does not, his neighboring county might get to work ahead of him, and, believe it or not, the "brings him across". After that is done, I explain to the county agent that it is necessary that he have the survey sheet forms mimeographed; we usually ask him to print twice as many as are actually necessary to cover each farm in the county. We also ask him to get the county maps from his county post office or highway department. I also impress upon him the fact that the leaders must not have electrical service, in order to assure their working wholeheartedly in our program to help get service not only to their

own farms but to their neighbors' farms as well. Then we schedule a meeting at some hall or church, and I leave the county agent telling him that I shall be back later to check up. Incidentally, we hold our meetings at night during the summer and in the afternoon during the winter season. After we arrange for these meetings we generally call on the janitor of the church or the hall, where the meetings are to be held, and ask him to look after the furnace and have the hall in proper condition for the meeting. That is how we operate from county to county; we can schedule ten county meetings in a row by this method.

I then go back to the first meeting scheduled and tell them our story--and, believe me, it is a "honey". These farmers are "all ears", too. I admit that we are probably a bit too optimistic at times, and also over-enthusiastic, but why not? The farmer is entitled to his lights! The attendance at these meetings ranges anywhere from 200 to 2,500 farmers--depending on the size of the county and the publicity given the meeting. "Unless you get a crowd there you cannot get a project", is what we usually tell the county agent. At the meeting I explain our method of rural electrification and how it works, and why the farmers should use at least 100 kwh a month in order to assure them the benefits of REA. By that time they are anxious to get started and eager to know lots of things; the meeting is then thrown open for discussion. After the discussion is closed, I ask the farmers how many of them would want to go through with the program and, invariably, ninety-five percent of the hands go up. Before I dismiss the meeting I explain to the farmers how a county survey will be made and that if each individual township does not sign up they will not become a part of the project. Now all of us know that the average farmer is rather peculiar when it comes to giving things away. The moment someone tells him that he is going to give the farmer something, he begins to suspect there is something wrong. But the moment he finds out that his neighboring county or township is going to get electricity through cooperation with REA he "wakes up" and gets busy. I then ask them to appoint, from among their neighbors, one farmer for each ten farms to be called on to get the customer survey sheets signed. I tell these representatives that have been selected that they must have these survey sheets signed and back to their county agent within a week's time. In that way they will push their assistants and get the signed sheets back to him.

Within a week's time we call on the county agent and ask him to "spot" the farms represented on the sheets onto the county map and to put a number on the map corresponding to the

number on the survey sheets. After he does that, we take the original map and superimpose the marks thereon onto a new and fresh map; then we draw in the proposed lines. We, personally, draw these lines on the map and also "spot" the farms on the map. Then we send in these sheets, together with the engineering and technical data which we have collected.

Next we call a conference with the municipal plant officials. They are generally prepared for us, because they feel that we are going to cut their rates. We tell them that we cannot set rates-wholesale rates--but that the rates we have been getting for various cooperatives are down anywhere from 1-1/2 cents to seven mills per kwh. Then we proceed to show the mayor and the politicians that if the co-ops purchase, say, for instance, 40,000 kwh per month and it costs the municipal plant only seven mills to generate, and then if they can sell that amount for twelve mills, they will profit approximately $200.00 per month on this transaction. The only things the municipal plant officials are interested in are: How much will the city make out of it? And, why should we go to the farmer in the first place? In one case we had them give us a tentative wholesale rate--from 1 to 1-1/2 cents averaging twelve mills per kwh. One city councilman happened to be a miller and he was paying a 1-1/2 cent rate for power at his mills. He told us that he could not see why the farmers could not pay as much as he did.

(Remarks off the record at this point)

Now, as I have said before, do not compare the other field men with me. We feel that we are getting a real job of coverage and doing a real job for the farmer, and for the REA program.

(The meeting adjourned at 11:00 a.m.,
for a fifteen minute recess)

THE CHAIRMAN: Mr. Boyd Fisher, who is head of Development, needs no introduction to this audience. He may be one of the few persons who really knows something about cooperatives. Somebody ought to know their history, their organization, their failures, etc. At any rate, this state-wide question is extremely important and everybody connected with rural electrification knows what state-wide is. Mr. Boyd Fisher.

MR. FISHER: Mr. Carmody, ladies and gentlemen of Rural Electrification Administration: I take it that this is a conference and so I may be borne with if I just talk as if I were with an informal group; because of this fact I have not prepared anything specific. The subject is all so familiar that the problem is not one of deciding what to say in the available time, but of selecting the most important things to say. As Mr. Herring has pointed out, the subject of the state-wide organization and the study of the promotion of a single project are to some extent separate topics and can be regarded separately. I like to think of them, however, as two aspects of the same topic, that is, the promotional work if we may call it such or this development work such as described by Mr. Falkenwald. This is the aspect of generating enthusiasm and bringing a message, which is the missionary side of our task. The state-wide aspect is that which comes back to us from all of the forces resident in the State, eager to know what they are receiving. And it is, in a sense, our problem so far as possible to transfer this job such as Charlie Falkenwald has described, to the people themselves through their state-wide representation. If we waited, as Mr. Carmody has indicated, and as Mr. Falkenwald clearly pointed out in his speech, until the people out there had grasped the whole idea and brought the thing to us completed, it would be two or three years--if ever--before we had a program. On the other hand, the development of projects by main strength and awkwardness, by difficulty, discontent, by bumping people's heads together and by polite devices such as this young gentleman has used, cannot go on forever. But at present it is a dominating aspect of our program.

As I heard Mr. Falkenwald, I felt like saying, "I used to be a field man once myself. I started this game which seems to have developed into a technique of which I am only dimly conscious." It reminds me of a party for a Colorado delegation. I met a man who I supposed was a Congressman. "I am just a newspaperman," he said. I remarked "I used to be a newspaperman once myself." He looked only politely interested. I said, "I got out of it, because I was not good enough to stay in it." He said, "It is quite obvious to me that I am still in it, because I am not good enough to get out of it." I began to feel that I got out of the field service and the operation of it because I was not really good enough to stay in it.

The method which Mr. Falkenwald has described seems at least forthright at times, but a little brutal. However, I am sure that Mr. Falkenwald has given you the whole works. He has not held anything back except the fact that he does not need to give them both barrels all of the time. I have seen

that fellow working and he doesn't use any pressure that is not necessary and he is a great deal more subtle in his work than it appears from his description. I don't think that any person could have opened up Illinois and Louisiana as he has without creating a revolution unless he had used pretty good sense in deciding when to shoot. Mr. Falkenwald waited, when he fired, until he shot away their fears.

We found little financing out in Illinois; their Committee, as they call it, includes representatives of both the Grange and the Farm Bureau and one or two other miscellaneous groups as well. Some months after Mr. Falkenwald's visit, we met the persons in this whole enterprise in one room and the only person who was frankly and completely critical of Mr. Falkenwald, although they were all glad that he was out of the State, was a man who had been employed by the utilities and who had been lent to the university, and is now called "Professor", and was still working the old game.

Now, we have a string of projects throughout the State of Illinois and persons who a year ago when I first went out there were more than critical, some of them frankly in opposition to our work, are now asking where they can take hold and help. And furthermore, in Louisiana, where we had no projects whatever, in less than a month this same active young agitator developed a million and a quarter dollars' worth of projects and has the whole State lined up, including Senators, for rural electrification, and a utility with headquarters in Philadelphia is now asking for the privilege of taking over our whole program in Louisiana. They will bring electricity to every farmer who has signed up if we will just let them do the job. I regard that as an accomplishment; and it happens to be the kind of accomplishment I like. It has its unfortunate features. It complicates matters that we cannot establish all of our machinery to take care of the results promptly enough to make good on promises which when made, were perfectly legitimate, but, when deferred from month to month for one reason or another, become disappointments.

Now, I think we have to get together with ourselves. Our program has not been as rapid in the working out as all of us have given our pledge to make it--I mean all departments. I am not saying that this is inexcusable. I think the departments that have not operated as closely behind these progressive results as we all should like, are examining their methods to see if they cannot do so; and on the other hand, I think it is up to us in the Development Division to work out a kind of balance of activity with the other divisions. If we are proceeding too rapidly in any given way, if we are getting out

of step, if we are getting too far ahead of the procession, I think it is up to us to do something about it. We cannot just create disturbances for other divisions.

I confess I am not wholly satisfied in the Development Division's point of view as to the amount of stimulating assistance we have had to give to the States. We have been caught between two points of a dilemma. On the one hand, we may have seen organizations highly aggressive, self-interested, with almost a racketeering approach on a state-wide basis for local people, such as we have had (I think I am talking in our own family circle) in the F.E.C. of Minnesota. On the other side is an extremely conservative, dragging sort of state-wide effort, such as we have seen in the Farm Bureau of Missouri where a very excellent man, the president there, Mr. Brown, appears to be ready this year to do what looked to be good last year. And we have States where all the avenues of promotion are blocked by so-called authoritative persons who are facing the wrong way.

When Mr. Cooke invited me, about a year and a half ago, to get into the cooperative end, he asked me after I was on the job, "How do you propose to go about organizing cooperatives." "Well", I said, "if you will let me work the way I want to work I will say, I won't. We won't do it in organizing all cooperatives. The cooperative idea is essentially initiative, rugged individualism developed through different community action of persons and it must be spontaneous. It must be self-developed. It must be at all times self-conscious and no person in Washington can organize a group of persons out in the field who are not already in the process of formation themselves for this sort of thing. It has to come from the local people."

You will see from what Mr. Falkenwald said, that that is the way we have been working--not he alone, but all of our field persons, myself included. We have done some things that are dangerously close to organizing cooperatives and, naturally, we don't always want to have to supply the stimulus. We would rather have it come from the people and in some States it has come from the people.

We have not had to organize our projects in Ohio and Illinois. We have not had a field man in those States. We have not produced a single project there. There are a few "Maverick" projects set up by those who preferred not to work with the state-wide and in which we have had to do a little more than write to them telling them how to do it.

So we have, I am convinced, an even situation in the problem of leadership. You may say as I say, that the cooperative is to be self-generated, but I was not quite correct in that. It should grow into that kind of self-consciousness, but there are to be leaders even in a cooperative, and it is our problem to take advantage of the cooperative technique where it is, instead of where it is lacking, to find a leadership in the people which can bring forth that self-consciousness.

I have a letter here, part of which I am going to read, which seems to me to present a very good approach to this whole problem. It comes from a Congressman in Texas, and is written to Mr. Cooke, who has not as yet read it. It has been routed to me in due course, because it is in reply to a letter which Mr. Cooke allowed me to prepare for his signature after we talked over the matter. This man wanted a field office in Texas, and asked us to set up a regional office there. We replied at some length, with which I am not going to burden you, that from the very start we have been opposed to regional offices and now it works very well not to have them. He comes back with this reply, however:

> "At that time, I said that while I thought the REA had been a tremendous amount of good, particularly in forcing private power companies to expand their rural lines,--"

Let me interject that I think to date that has been our chief accomplishment. It has been our influencing value. It has forced the utilities to get busy and, for instance, in North Carolina, they are boasting of the number of hundreds of miles of lines that have been built as the result of the activities of the Rural Electrification Administration down there. As a matter of fact the North Carolina State Rural Electrification Authority is boasting about our influencing value in their own accomplishments. If it had not been for their interference with our accomplishments, the accomplishments would have been still greater because we also would have built some lines. At any rate, that contribution is recognized by this Congressman, who says:

> "Our people have not been able to receive any large amount of direct help because of what seemed to me to be unnecessary and unreasonable delay in giving them any assurance of action."

You understand that this unreasonable delay he is talking about is not delay in construction or delay in loan contract negotiations. This is wholly our complaint I am dealing with. We

have not worked fast enough. I am not passing on any complaints to anybody else. I quote again from the same letter:

> "The only way we have ever made progress whatever in our section has been through the help of such private agencies as Mr. Morrison, who I believe to be a high-class and helpful citizen, but who is after all in the business for what he can make out of it. He has, however, been the only means our people have had of getting any kind of pseudo-authoritative answers to their questions and it will never be possible for these farmers to successfully carry on a business with authorities at Washington with no means of local contact."

I want to say that this Congressman must not happen to be in a district in which our field people have worked. We have a number of the staff who have been down in Texas helping them. Mr. Cooke, Mr. Nicholson, Mr. Lewis and Mr. Falkenwald were there within the last four months. The territory is so big--I think it is about one-twelfth the continental area of the United States. We have not yet been able to cover all of the ground.

I quote again:

> "Certainly, the Federal Land Banks have to their credit a record of service unsurpassed by any governmental agency and I think it is in large part due to the fact that they are scattered over different sections of the country where officials with the power to say "Yes" or "No" can be contacted by the people. It is all very easy for those who are familiar only with the situation along the Atlantic Seaboard to say that they can carry on negotiations out of Washington, but it is impossible with people two thousand miles away."

The Congressman goes on for a whole page about the economic situation, etc.

That is, in brief, that our program must be carried to the people and that the way of doing it is to establish branch offices. We pointed out that it would be necessary to have a staff of engineers, lawyers, clerks and stenographers, and that after we would have set up an office, the Congressman might feel that it represented just so much patronage to

be controlled. The original idea would have gone native. They would be promoting some political set-up out there.

The Congressman is right if he is sincere. If what he is after is getting the program to the people, he is right to this extent, that the "touch and go" method does not always ring the bell. There has to be a gradual process of education and a gradual process of organization which we have not yet fully evolved.

I think there are two answers to this problem and toward the approach which we are making. The first one, the state-wide promotional organization is apparently the best that the money of our friends out in the field can do. It looks to them like a permanent solution. To me, it is a temporary, even an objectionable solution, but it is the only one that I can see for the time being which could be substituted for our aggressive but "touch and go" field service in place of a local agency such as the Congressman justifiably asked for. We have it in Ohio, in Indiana and Wisconsin. It is now rapidly developing in Iowa, Missouri, even Virginia and Michigan. We have a double-barrelled swarm of it in Minnesota and we are in the process of establishing one in other States.

In other words, the organization of the farmers themselves has been into these state-wide organizations, with which we can come in contact by a process of collective bargaining and which can have a staff such as we might set up if we had a legitimate basis--a staff locally selected, responsible to the local people and a staff whom we are at liberty to argue with or to repudiate in any given aspect if we want to. We have to accept no responsibility for the mistakes of an organization like that as we should have to do if we set up local offices out in the field. Furthermore, when we have a situation such as we have encountered in Minnesota, with two lively organizations trying to "cut each others' throats" by calling in the Senators, the Governor and other prominent folks in political life--we are able to make a pretty graceful exit until they compose their own differences; whereas, if it were our own offices that were being attacked we would have no recourse. Now I know that is arguable, and many persons might say that the argument is weak. Some think where there is such a rivalry that we should set up a bureau to conform to our set-up. I don't like that method. It can have no valuable results in producing a single, cooperative, lively, local movement. At least, so it seems to me.

The idea of the state-wide is really working out as a thing that is pretty well limited by what we can do legally and our established policies added to those legal limitations. As Mr. Nicholson pointed out at our last meeting here together, the law under which we are now operating makes no mention of promotion as a thing for which it is legitimate to spend money--not even promotion when it is called development. All we can do is to assist in the project and give it the help whereby our money will be most wisely expended. We have always to bear in mind the effect upon our loans.

One thing we cannot do is to hand out any money whatsoever to pay persons whose sole job out in the field, not members of our staff, is to promote projects. The only way we can get any compensation back to them, is to pay them for that part of their services which has benefited the project and only on projects for which we have allotted money after the money has been allocated. Could it, by any chance, be legitimate to set up in those compensations any margin of payment which they may have for good will, and may devote gratuitously to the promotion of other projects for which they have not yet received an allotment? Maybe that will balance out. The Farm Bureau of Ohio spent an amount estimated at close to one hundred thousand dollars on promotion before they received back any money, and before the Rural Electrification Administration gave them any part that is liable to come back. The last I heard was that they were about nineteen thousand dollars in the hole, so you can see in the course of time that they may come out even. They are not trying to make a profit.

All we can do is to allow the cooperative--I wish I had Mr. Herring's statement for this which he read at the advisory meeting. It read something like this: That the cooperative itself may make a contract with the state-wide primary agency recognized as disinterested by the REA, such as the Farm Bureau or Grange or a combination of the two, whereby the local will allow the state-wide to supply engineering and other services in getting them going for a fee, whenever it is able to pay it, and that that fee will be covered within the four percent engineering service fee allowable to be allotted to the project. There is no other way by which these state-wides can get compensation at the present time unless some supplement be added in the future.

We have tended more and more to approve and now urge membership fees of five to ten dollars per member in the cooperatives so that there will be a limited working fund on

which to operate. I think it is going to be discussed here; and on my part, I want to urge that, as soon as the law permits us to lend money for the operation of projects, we make a certain loan in addition to what we have been making, for the operation of projects--the payment of the manager, the payment of the little office, etc.--until, say, after the lines have been energized for possibly one or two months. If we can do that--if we find it possible to do that on projects that can stand the additional financial burden, then these membership fees might include a little more for the purpose of paying promotional expense.

I don't think there develops in these projects the answer to the whole problem of financing these state-wides, but I mention that there is this principal problem that is particularly difficult because it is one thing that has clearly arisen. The state-wide organizations are all fairly well satisfied with the exception of one which I think may be made so after we have looked into it. They are fairly well satisfied with what they have gotten out of the four percent engineering service contract, but it takes us several months to develop a project and get it through our organization. The first advance of money does not come for a considerable time after their first meeting. Oftentimes, the first meeting Mr. Falkenwald described to you may easily be forgotten if the state-wide is going to wait all of that time for their first money. How are they going to pay their staff?

An agency like the Farm Bureau Federation of Ohio may have a fund from which it can draw, but agencies like the Farm Bureau of Virginia and the Grange of Virginia have no funds on which they can rely and it is a very serious problem to get a state-wide going. I am very unhappy to report that the difficulties under which the Virginia Farm Bureau and Grange had to suffer as a result of not being able to get funds to pay their staff and keep it contented have resulted in what may be a very serious grief in the Farm Power Board itself. They may fall out and blame themselves for what we have not been able to do for them. But the danger which I see in the state-wide promotional agencies, and a thing that makes it objectionable in the long run to me, is the fact that unless it does begin to pay, unless they find a means to keep going, unless they have a relationship to these local agencies all over the State, the leadership of which I spoke may become too aggressive, too selfish and too self-interested; we may find that our cooperatives are in the control of little inside groups, that bear looking into, in each State.

I am far from happy about some of these cooperative agencies--wholesale cooperatives throughout the United States. The cooperative in Minnesota which started out as the F.E.C. seems to me to have too much of its control in the hands of a small group of insiders. The cooperatives of Illinois are headed by one man who feels himself now so important that he can barely be persuaded to talk with anybody but the President of the United States. Now, I am not actually quoting the gentleman. The quotation I could make is even more offensive. We find a number of folks who think that they see in this movement a chance for the state-wide.

An exponent of this view came up from North Carolina the other day. This gentleman said, "We have it worked out. The Farm Bureau and Grange are going to call a committee to organize rural electrification cooperatives. We are going to do this for whatever the Bureau in Ohio is getting for it, and the profit we make will be distributed to the agencies in educational work." There is nothing on which you can fool auditors as you can on educational work. I said, "Look here, Mr. So and So, I should like to have you amend your language before you go up to see the Administrator. He will not like that kind of language. At least speak the language that sounds like altruism. That language sounds like racketeering to me." We finally got his language somewhat purified. I was not happy about his approach. He said, "I am not up here for charity." I said, "You convince me that is so, but some place in the State of North Carolina there ought to be some agency which is so interested in the welfare of the farmers that it may do something without being out to play, say, an unimportant game." I have not seen that agency yet, I will confess to you.

I am convinced of this, that if self-interest is going to rule in this problem--and I am convinced that self-interest has its legitimate place--I want it to be the self-interest of the farmers, the persons closest to the problem of rural electrification. And the first representative of the farmers that is going to act for them, I want to be the farmers' own electrical cooperative. I want to have that self-interest so close to the problem of making our program work that nobody else's self-interest can get a look in. Let's convince these State organizations that they are just here on sufferance. They are just scaffolding for the building that is to come, that the thing we really want to call important will be the association of self-energizing cooperative systems we have set up; and I am rather of the opinion that we have had that in mind sufficiently to keep open some of the avenues so that that can be brought about.

At our conferences which were held a week ago Monday with the National Advisory Committee on Rural Electrification representing some of the farm leaders of the country and some who are not farm leaders, it was brought out that we might have an association of the managers of the electric cooperatives. Someone there made a very important suggestion. It was Mr. Erwin King of Washington. He said, if you have only the managers of these cooperatives, they will appear with strictly professional interest and they will run the show. You must have some of the directors, presidents or some of the elected officers with you. Therefore it was voted the thing to do was to either have a president or elected director and the manager to come to the meeting. I am hoping that we shall have a national conference of our energized cooperatives before very long. I don't think the time when they are in the development stage is proper because we don't know who is who at that stage. It is only when they get to the highly progressive stage and the farmer knows that he has to pay the bill, and what he has to pay for amortization and for interest, that you get down to really responsible people who are going to carry through the year. Promoters will be washed out and kicked out by that time. As soon as we have enough lines energized, I hope we shall have a conference at which we will agree as to some of the interrelationships of these persons who are close to the problem; and, as Mr. Sears has pointed out, I hope that we can have legitimate meetings before that.

Again, the wish that we have in mind where we have, say, 20, 30 or 50 projects in a State interrelated in such fashion, is that these agencies in the course of a day, a night or a month will do at least a little promotion work as the time goes on, and that we can obtain results from these state-wide organizations headed by gentlemen who can talk only with the President of the United States.

I shall be glad to go into Mr. Falkenwald's talk when you are ready.

THE CHAIRMAN: There was some doubt in my mind as to whether you were going to get around to your state-wide subject, but you got around there all right and I think covered it as adequately as it can be covered now because, as you say, you are a little unhappy about these State relationships and you are looking for an effective substitute for them.

MR. PACKEL: There is one fundamental question which fits in between the discussion of Mr. Fisher and Mr. Falkenwald, and that is the situation which Mr. Falkenwald speaks of in developing six of these projects by <u>counties</u>. Of course, an electric

line cannot recognize the boundary of the county. I am thinking especially of an instance where in a very short time we had three separate projects in three contiguous counties in Pennsylvania and I am wondering whether something is not done in an early stage in the development of a project, to combine projects so as to include more than the one county.

THE CHAIRMAN: Is there a question?

MR. GILSON: It so happens that on Mr. Falkenwald's last trip to Louisiana he developed in that month twelve different projects covering twelve counties. While developed as individual applications, they were sent to Washington with the suggestions that various units be consolidated. Acting upon Mr. Falkenwald's suggestions, they were tied together so that we now have four complete projects---one consisting of four counties, one of three counties, and two of two counties each. One unit was declared not feasible. As a result of the provisions made by Mr. Falkenwald we now have four integrated projects instead of twelve scattered units. I merely mention this to show that steps are taken in the field to bind county-wide projects together.

MR. FALKENWALD: When we talk of county-wide projects, we merely talk of the county as being an area for purposes of identification of the project itself. We may be talking of county-wide projects and still be developing one-half of each of the surrounding counties, but when we develop several counties such as ten or twelve, whatever it may be, we explain that we shall send these in as potential individual projects, however, they may be coordinated so that they may unite in reduction of overhead, operation, maintenance, etc. We have to talk in terms of counties, however, to keep the initiative aroused in that particular county.

THE CHAIRMAN: Has anyone a point of view on this?

MR. BACON: Speaking particularly of these counties, these movements grow from some one person who is interested in the small area. For instance, in Pennsylvania, I was invited to visit Lycoming County. A gentleman in Williamsport had heard of it and wanted that taken up. An investigation was made to see where this particular area was situated and it was shown that it should be tied in with one of the other counties. A consolidation with Sullivan resulted. And so it goes. This movement just does not bring us out of the dark. Go down to Louisiana and you find someone who has heard about the project.

They had four miles or fifteen miles that could be hooked onto the power lines; then it was found that we could consider state-wide development.

Mr. Lake, I think, has had the same experience in Georgia.

THE CHAIRMAN: In general, there is more than the fact that the area originates with a man in a small area affecting the project. Perhaps, the most potent reason why the projects are not worked out on a larger and more integrated scale is the fact that we have not yet had an understanding with utilities companies that we can rely on, an opinion from them when we say that they can rule. In other words, in a great many areas where there have been years of effort to get the "juice" to the farmer, with the utilities saying that they did not have the money or could not afford it, yet started to work immediately when a group of people expressed the necessity for electricity and indicated that they might form a cooperative. So in waiting to integrate territory, frequently, the best part of it is lost. That has actually happened already in a great many projects. In a sense, it may be even better to waste money--I say that deliberately--than to have the territory so arranged that eighty percent of the farmers cannot have electricity at all for ten or twelve years, or perhaps never, without a Government grant. That would be an excuse if they are out to block the line. That is the real heart of the matter.

Then the other worry is that people come to us and say that they are endeavoring here to do the kind of thinking for people who know that it is of no use to do it at this moment, really influencing the power companies to act in building the lines and then build where these people originally intended to build and where they are building preliminary lines.

Now, I do not know what the possibilities are for getting the kind of understanding that we all should have from the utilities. Gradually, we get an understanding with particular attention drawn to it. We have certainly spent a great deal of time. Mr. Herring, Mr. Swanson and other gentlemen in the organization divided territory with some of the utilities that started only after this program got started and to farmers that had begged for the service for a long time. So what we have to do is to make plans there, but I believe this--I believe no person in this organization whether in the Legal Division, Engineering Division or any other division, ought to hold up a project on his own judgment without looking into whether it can be integrated later, or without taking it up with the

people who originally developed the project. And, so far as I have it in my control, that is the way we want to handle it. We will integrate our own activities first, hoping thereby to spend the money more wisely and thereby to further the interest of the farmers against all outside agencies that would seek to bespeak their purpose. That is our business; not only that but most of us, you see, have sworn to carry out this statute. We are bound to carry out the purpose of the Act, are we not? All we have to do is to get the proposition straightened out in our own minds. As a matter of fact, a good deal of this integration is taking place. I think, I said to some of my associates the other day, I am impressed more and more with the fact that we are in this development just where the street railway industry was, and the power company was, in the 1880's and early 90's when all they could get were fifty or sixty franchises for street-car lines and horse cars. In many instances, it took years and years to integrate them. Furthermore, they were not integrated without being heavily watered and even with the watering, they were better than they are today from the point of view of interchange of service. We are going through the same thing. We cannot wait for perfection. If we waited for the perfect project and perfect integration, we should wind up with nothing. Let's get the "juice" into the people's houses.

That is one question, an excellent question and one we have to work with all of the time. Here is another one. When any one of us, I don't care who, in any department gets hold of something that he thinks ought to be held up until he can get a better decision, have him raise the question at that moment. Do not let it lie on your desk or put it in your desk and say you will take it up later because every single moment of delay frequently means that some of these farmers are going to be so discouraged that they are no longer interested in giving easements or getting lines to their property. I do not think we realize, those who have not been in the field, how many times people get discouraged and quit because they do not know where or how we are going to act. We hold things up too long. Each one holds things up wondering what to do with them. That is not the way to do it. As soon as a doubt rises in your mind, go to your chief. If your chief cannot solve it, we can put it up to the Administrator. I have never seen the Administrator dodge a question. I have never heard him say, "I have not the answer"; he has frequently said, "I want to clarify it". So there need be no occasion in this organization for holding anything on your desk pending a decision as to how it ought to be handled, because the one person who knows how it ought to be handled will always accept the problem and make a decision. If we get nothing more out of this conference than that, I think we

shall have gotten a great deal. There must be other questions as to whether or not this development work as Mr. Falkenwald explains it is correct. What do you think about it, Mr. Pyles?

MR. PYLES: Generally, I use the same methods as those explained by Mr. Falkenwald, and in many cases I use even more drastic methods. I recall one particular instance in Missouri where I had difficulty in obtaining a proper wholesale rate for power from a municipal plant. The mayor of the town seemed to have full control and none of my arguments could induce him to agree to give a rate below 2¢ per kwh. I interviewed the editor of the local paper, who was also a member of the city council, and explained how the arbitrary attitude of the mayor was causing the municipality to lose a fair yearly income as well as creating an ill feeling between the farmers and the city, thus hurting their trade territory.

The editor wrote a scorching article for the paper condemning the mayor. A committee of the leading citizens waited on the mayor and in three days the mayor agreed to give the desired rate.

Each State has to be treated individually according to its peculiar conditions. In any State where I find that there is complete cooperation with REA on the part of the agricultural Extension Service, such as is found in Arkansas. I find a lot of time can be saved by having the director of Extension Service call a meeting of all the district managers, farm specialists, county agents and home demonstration agents. At this meeting I discuss the entire REA program and explain the steps necessary to develop a project. I also explain the use of electric power on the farm and how it can be utilized to increase the activity and revenue in each branch of farming.

The district managers then arrange my itinerary picking out the most feasible counties in the State, from an economic standpoint--taking into consideration the value of farm land. They have the county agents send out notices to every farmer in the county requesting their presence at the county-wide meeting. Working in this manner in one month's time in Arkansas, I have developed $1,400,000 worth of projects.

THE CHAIRMAN: While you are on your feet, just make a little comparison--for the benefit of those of us who are not too familiar with the way the Extension Service works. Will you say a word as to how you understand it and how it works in the State where you have been.

MR. PYLES: In Arkansas, the agricultural Extension Service, is controlled by the University of Arkansas, with operating headquarters at Little Rock, under the direction of Mr. C. C. Randall. They have a manager for each district, consisting of four, who are directly in charge of the operations of the county agents. The same applies to the home demonstration agents. In addition they have a specialist to advise the county agents in each branch of farming, poultry raising, soil conservation, etc. There is also a farm management director who holds yearly outlook meetings.

I have persuaded Mr. Randall to make the electrification program and the use of electricity one of their major objectives in the farm program. I have explained to each of the specialists how the use of electricity will increase the scope of each branch of farming, and will provide "meat" for their publicity department--the county agent can publish how a certain farmer has increased his activities and revenue by the installation of some electrical appliance.

Mr. Randall is going to have a demonstration farm equipped in each county where an REA project is constructed. He is also going to assign each county agent a certain quota of electrical appliances to be installed by the farmers in his county.

QUESTION: Were they ready for you?

ANSWER: They had everything ready for me--all of the advertisements prepared, the program arranged and notices of meetings sent to all farmers.

QUESTION: How many meetings did you attend?

ANSWER: I attended meetings in fifteen counties. We have completed in eleven counties, $1,400,000 worth of projects--this in conjunction with a previous operation, two weeks when I was there before and two weeks on this last trip. The main reason I have stated Arkansas as a particular case, is that it so happens that in many States I found the Extension Service completely tied up with the power interests. In one State it so happened that the power interests subsidized the electrical school of the university. They issued orders not to coordinate or cooperate with the REA, to have nothing to do with it and not to send them any notices of the power meetings. In such cases we have to find agencies who will work with the REA. We found that the municipal leagues are more or less with us and

so we arranged meetings through them to get out publicity. We usually find there is an agency somewhere in each State which will carry the program to the farmers.

THE CHAIRMAN: Yes, Mr. Lewis.

MR. LEWIS: I have never been sent out to open a State, but the steps that Mr. Falkenwald has mentioned, I believe, are those which I should follow if I set out on a job like that. I have been out usually on specific assignments. Before starting a project we have to discover the leadership and arrange the publicity for the area that we intend to cover. The success of one's effort depends altogether on how successful he is in finding the leadership that will carry on the program. That is about the only thing I can add to the points brought out by Mr. Falkenwald. We have to take the situations as we find them when we get into the different territories and find our own answers.

THE CHAIRMAN: You have to be resourceful.

Mr. Johnston.

MR. JOHNSTON: I should like to ask Mr. Pyles whether in Arkansas he knows what proportion of the expense of running the Extention Service is borne by the Federal Government?

QUESTION: Do you know?

ANSWER: I do not.

MR. GILMORE: I can answer that. They bear approximately fifty percent of it. They have State crews for Extension Service; they also have Federal staff Specialists. The Secretary of Agriculture has jurisdiction over both branches.

QUESTION: I should like to ask whether that is just for Arkansas or for the whole United States?

ANSWER: For the whole United States. Each State has an Agricultural College and also an Extension Service and the Federal Government pays approximately fifty percent of the expense.

MR. JOHNSTON: The reason I raised the question, is because it seems to me that REA ought not to take an easy "No" on the matter of cooperation from the Extension Service which is being so heavily supported by the Roosevelt Administration

which is sponsoring the REA. I think we ought to bring more and more proper pressure to bear on the Extension Service to get that cooperation.

THE CHAIRMAN: If we do not have somewhere in our organization a record that tells us definitely, clearly and currently the data about all of the agencies that we accept cooperation from because they are supported by Federal money or similar funds, we ought to have it. That ought to be in the possession of some one person or one department or ought to be in the possession of the heads of every division and many of the units of this organization. We ought to know all of the time, what those relationships are.

The project gets its allotment. The lawyers take hold of it. They start dealing with someone whose name is on the paper, frequently without checking with Development to get a line on the personalities that must be reckoned with. The engineers get hold of it. They deal with some people. Frequently they, too, fail to take advantage of past relationship. We lack unity. To supply this deficiency is part of the function, part of the purpose of this conference. The Auditing Section as it deals with those people, may inherit all of the good will that was created and answer and explain away any unjust criticism and compose their real differences. That is the thing we need to do. We should start with our friends and we should know who are <u>not</u> friends. I suggest that such a list be made. We must know the people we cannot deal with and if we are at fault, let us make amends and get a fresh start.

MR. LONG: Of course, I don't feel quite right in having Mr. Lewis and Mr. Falkenwald do all of the talking and I don't feel my day is quite complete unless I get up and say something, too. Right in line with what you have said, Mr. Bacon and I were privileged to be sent down to Alabama. On our way to Mobile, we stopped in Talledega County at the office of the County Agent, Mr. C. V. Hill. We found him very much interested in rural electrification. There were two or three farmers present in his office at the time. We suggested to him that we were going to be in Alabama for about ten days and if he cared to have a meeting of his farmers in this county to learn about the Rural Electrification Administration's program, we should be glad to talk to these farmers. He became very enthusiastic and said, "Why certainly. I shall send notices out immediately for the following Tuesday or a week later." This gave him about ten days to call the farmers together. At his own suggestion, he also promised to notify the County Agents from four or five

surrounding counties who in turn would notify the farmers and bring from twenty-five to fifty farmers to these meetings. We went on our way happy in the thought that we could talk directly to the farmers in Talledega County.

When we arrived in Montgomery, we called up the Extension Service. Of course, we should like to have their cooperation in the program for various reasons. We have a right to expect their complete cooperation since they receive funds from the Federal Government, thus making them a government agency. They are financed also by the State. In Alabama, we found that a very small contribution, probably one percent of the Extension Service fund, comes from the power company. This is true in a number of States. I called up Mr. Wilson, who is head of the Extension Service, and told him that we were in Alabama and should like to have a little talk with him. He asked when, and I told him tomorrow would be the most convenient time, which was the 16th. He said, "I am very sorry Mr. Long, but I have a very important engagement and it will be impossible to see you tomorrow. If you get here again sometime, I shall be very glad to see you." I said, "Very well, we shall be back in about ten days." He put us off from that also. He stated that his important conference was at Atlanta, where the private utilities had a conference. The State Extension Service appoints the County Agents over the State and has something to say about what their policy should be. On the 21st, when I was at Ozark, c/o W. D. Thomason, I received this telegram from Mr. Hill, County Agent.

> "MR. LONG, REA OFFICIAL
> MEETING AT TALLEDEGA POSTPONED. POWER COMPANY AGREES TO BUILD NECESSARY LINE. MANY THANKS." SIGNED
> C. B. HILL, COUNTY AGENT."

Where he received our address and how he happened to know that we were at Ozark when that meeting was staged with two or threee days notice, of course we can only conjecture. Nevertheless, I received that telegram at that place and this I think is what Mr. Carmody had in mind.

THE CHAIRMAN: Thank you very much. Now, when I asked to have somebody from the Legal Division and someone from the Engineering Division comment on this thing, I did not mean to leave out any of the Development men. This is not the last day of the conference and not the last time you men will have an opportunity to express yourselves. You are a part of every activity. If you, as development men, go into a territory and establish

relationships with these agencies and make commitments the people have some right to expect these fulfilled. If, then, for some reason we cannot fulfil them, we do want to give you an opportunity to explain to some of the people why such is the case. We cannot ignore your relationship to them. We cannot change our decisions or alter our decision without giving somebody a chance to go back and explain to the people in the country why we are making those decisions. We can do this through newspapers, and we can do it by word of mouth to the developers themselves. We ought to give them an intelligent answer that grew out of the decision so that they can take it back. I do not know to what extent we do that. We ought to do it in every case.

I think it is necessary for us, when we decide not to put a project through to let the people know why. There will be many such cases. There are decisions that must be made for engineering or for legal reasons that could not have been anticipated by the men in the field nor by people who were out to get the service, but if they are reasonable decisions made by a reasonable body of men, they will be accepted even if the people are disappointed.

MR. NICHOLSON: If you want a statement of the importance of having a project developed as far as possible in its final form, before we do the necessary technical work, I think I can make a statement.

I am not disposed to make any criticism. I am merely making a suggestion that may be helpful. I choose a project in Minnesota as a case in point and typical of a number of other similar cases. That happens to be pending for action perhaps today or this week. The plans and specifications have come in calling for thirty-five or fifty miles more than the project originally called for and more than represented by the map which was attached to the loan agreement and necessitating a larger sum to construct than the allotment that was made. This contract is now in my office for execution by the Administrator. We have been holding up the execution of the note and mortgage pending a decision as to whether the allotment is to be increased. These documents have already been prepared.

I have here an analyses of several projects. There are sixteen projects in which something has happened after the bulk of the legal work, as far as we are concerned, and the borrowers are concerned, had been done, making it necessary to do it all over again or to do an additional amount of work

which was equivalent to what had already been done. In many cases, it is more of a burden on us and the borrowers when it is necessary to execute an amendment to the loan agreement than it was to put through the original deal. We have forms standardized to take care of these original documents. In many cases, these standardized forms are not appropriate for amendments. These unexpected situations are very confusing to a number of the local people and the work is often greater when you have to revamp and change the set-up. Now, the problem in such cases is this: Either they want to make a change by way of additional mileage or incorporate other territory or revamp the original lay-out in some other respect. Sometimes the mileage is to be reduced. Now, whether or not the mileage is increased or decreased, we have the same problem. Our agreement is not to lend them so much money to spend as far as it will go. That is not the agreement at all. The agreement is to lend them enough to build a project, as allotted, not to exceed a certain amount of money; so that if there is any attempt made later, even within the limits of the allotment, to increase the mileage for which the allotment was made, then you have a new deal, something to which the Government has not committed itself. Although the Administrator has the legal power to change the deal and make a new agreement, namely, to build a different project, it does require his action before the borrower can lawfully proceed and before the Treasury of the United States can lawfully make the disbursements.

Now, many of these changes are impossible to anticipate. The suggestion I want to make, which I am sure is wholly constructive and not improperly critical is, that within the bounds of human foresight and sometimes by taking of a little more delay then has been the case in some projects, we get the project set up in its final form before we go ahead. That may involve the incorporation of two or three counties; it may involve more careful attention as to what the farmers want to build; it may involve a little more careful attention to the source of wholesale power; and it may involve a lot of other things. Whatever the reasons--there have been various reasons for these changes at the last moment after the allotment has been made--it is an enormous drag on our program to have to do this additional work.

In the matter I have mentioned, I have not referred at all to those cases where we have proceeded with our eyes open. We made several partial allotments under the old act, expecting that we would make additional allotments under the new Act. In cases of that kind, there is a great deal of

additional work, but we could not help ourselves. I am only referring to cases where it would have been possible to have foreseen these changes.

I have a list of projects on which we did a considerable amount of work, almost all of the necessary legal work. A few of them involved a number of unusual problems. These projects were later rescinded and never went through at all. The point I want to make is that there are so many cases of this kind that cannot be anticipated, that the problem of those that can be anticipated becomes important. If we in the Legal Division--and I think this is true also in the Engineering Division--could have been free of all of this additional work, it would have put our program ahead by several months.

MR. LAKE: I should like to ask if that increase in allotment is due to the fact that we have not been getting the right costs. Are these lines costing more than the original figure?

ANSWER: I think the engineers can answer questions about costs, but from my own knowledge, which in some cases is quite personal, it is usually due to a change in plan on the part of native people. They want to do something different from that which they originally counted on doing, either by way of building more miles, or going into additional counties, or putting together two projects, or taking out something from the project, etc.

MR. WINDER: I think Mr. Nicholson voices a very pertinent subject that is giving us a lot of concern. As a problem it is probably giving us concern because it is so late in being discovered. When the allotment is originally made, we allot a certain sum of money to build a certain number of miles of line with a more or less definite knowledge of where those lines will go, but as soon as the allotment is made all activity on that project is through the Engineering Division. It then goes to the hands of those who discuss a new location or possible proper integration, matters of three-phase development where a single-phase line might have been contemplated, questions of new power sources, and many other problems that could not have been fully anticipated at the time now enter into that picture, before a loan contract can be prepared. It seems to me that this presents to us a definite problem of organization, and which we do not now seem to be organized to meet--a changing condition that is bound to follow after an allotment.

THE CHAIRMAN: While you are on your feet will you just make a suggestion as to the character that particular organization could take. Have you thought it over? Does it mean a closer relationship among the departments following allotment? Does it mean that before an allotment is actually made that the lawyers and engineers be brought in and given an opportunity to raise this question of integration and questions of increasing the allotment? Are the conditions sufficiently established before making the allotment announcement so that the engineers lawyers and development people could then agree upon what it ought to be and let it sit there, or are there times when it is more important to announce the allotment than to have the amount correct to the last cent? I am thinking of the practice of some power companies that send men into the area when a project is developing and tell people REA will never provide money, etc., and otherwise try to discourage them.

MR. WINDER: Exactly, that occurs between the time the allotment is made and the time the contract is finally approved. There is an urgency about making our allotments that is perfectly natural. We understand what that is. Then we have the difficulty of delineating the exact area of any particular project. When the project is ready to go forward to construction it may be completely dismembered because of the failure to obtain the anticipated source of power. Another one is completely dismembered because the source of power anticipated when the contract had to be turned out, in the eyes of the Engineering Division, had not all the feasible parts of reasonable heavy construction that were required to obtain that power. As I say, these things cannot absolutely be anticipated at the time. There should be some sponsorship though, that originated at the time the project originated, which carries through.

MR. FREEMAN: Along this line of development, I should like to make a suggestion or discuss what Mr. Swanson and Colonel Babcock and I went over the other day. One of the problems that is important is the question of easements. Apparently we are not able to pay contractors for work done until easements are in. I wonder if it is possible at the time the project is developed--when they are getting the customer's surveys signed--for the development men to get easements at that time if at all possible. It seems to me it would smooth over a great deal of trouble that seems to come afterwards.

THE CHAIRMAN: We shall not be able to exhaust the subject of estimates in twelve minutes.

MR. HERRING: This question of procuring estimates is certainly up to the cooperative people and not up to us. It is not our job.

MR. CARMODY: May I ask Mr. McAlwee a question? Will you please tell me what they did in Adams County, Iowa? I do not remember the full terms of that contract. When the lawyer and engineer developed that project in what we thought was a very efficient way, what was the situation there?

MR. McALWEE: A signed contract to take service and pay for it at a specified time and for a determined rate. They did not get the easements at that time, however the consumer agreed to give easements on the same contract, which was witnessed.

MR. NICHOLSON: They agreed to get the easements.

THE CHAIRMAN: This was a membership card that was devised by the lawyer for the Iowa-19-Adams project. It seems to me that it covered the essentials of the relations between the cooperative members and their cooperative. They agreed to pay for a minimum amount of "juice" which was one question, and the other was on the same card witnessed by two witnesses, where they agreed to the easement.

MR. NICHOLSON: This is to be remembered in that connection. Before the easement can be signed, it must be ascertained who can sign it. Easements must be signed by the owner. Sometimes there are three or four owners and the determination of this ownership is the problem or chief objective. Any solicitor knows that when he is given an easement form in which the name of the owner is filled in and the description of the property, he must go out and get the signature and usually that information is not available and certainly not at the time the customer survey is made and initialed. I would caution against any attempt to get easements at that time because if you have to get them to sign something over again, you experience that much more difficulty. If the description and name of the grantor is available and can be incorporated in the easement form, then of course, the earlier this work is done the better. There is no use shooting too fast. That has been one of the greatest stains on our customer relations. The local people shoot too fast, and before they know exactly what they want to do.

THE CHAIRMAN: I believe, Mr. Nicholson, that out of this arrangement which you have set up, a better method will be

evolved. We may be able to anticipate a great many more of these things. I think that stopped a lot that the fellows in Adams County might have accomplished, that is, a 100 percent job; but they certainly got commitments because they knew what they were doing. This project was accomplished by an extremely competent lawyer. I think they made the beginnings out there, and with the help of the Legal Division I am sure we have the basis for going ahead.

Yes, Mr. O'Callaghan.

MR. O'CALLAGHAN: I might say, we have sent a form of membership agreement to practically all of our borrowers which calls for the prospective members to agree to give easements on most of our bylines and provides particularly for getting the necessary easements. Another point too, is that these projects are then in the development stage. If you have not a borrower you have not a grantee to be named in the easement, and you have to have a grantee as well as a grantor. It is probably some months after the development man gets through before a corporation can be formed to be the grantee under these easements. Another point is, the getting of the easement is not something that bus drivers can do. This work has to be done with an exceptional amount of care. There are quite a number of problems that come up. The project descriptions have to be accurate or they do not mean anything.

THE CHAIRMAN: Of course, you could do this and it might have some value. If a man would agree to give an easement, to the cooperative of which he would become a member, then you would at least be over that hurdle.

ANSWER: We get that.

THE CHAIRMAN: I understood they did not get that in Georgia-20-Troup. Was that not one of the troubles?

MR. HERRING: Yes, that was one of the difficulties.

MR. LAKE: We did not have any farmers at the time I was down there.

MR. CHAIRMAN: I see the difference between getting easements themselves and the proper descriptions that were told in the court of law in getting permits or commitments is to get one when the time comes.

MR. O'CALLAGHAN: In the State of Iowa we are not requiring easements from the owners. It is not an acute problem in that State but it is an acute problem in most eastern States where we feel the fact that we cannot allow requisitions to be honored until easements are obtained for the portion of the project to be constructed with the advance requested in the requisition.

THE CHAIRMAN: Mr. Nicholson told me the other day that he is turning easement work over to one lawyer who will specialize. This means that the easement problems ought to be handled with greater speed and uniformity. From what I have seen and heard in the field, it is an extremely difficult position because it varies so from State to State.

MR. O'CALLAGHAN: I want to follow the inference that in requisitions they are held up by us on account of the easement situation, rather that we are compelled to hold them since we do not get the borrower's compliance--a very reasonable requirement on easements. The trouble lies out on the project.

MR. ADAMS: Sometime ago I was asked a question, along those lines, that I was unable to answer and I should like to suggest that perhaps Mr. O'Callaghan might be interested in answering it. The question was from a casual observer who said that in disputed territory, the utility moved very rapidly in building rural lines and that they did not appear to be held up by the difficulty of receiving easements. He wondered why REA projects met so much delay in their easements.

MR. O'CALLAGHAN: That is not a very hard question to answer. The utility has the power of eminent domain. They can build their line and condemn property afterwards. They have an organization. They also have a reserve fund that they can put into action which is something our local borrowers have not.

MR. ADAMS: Might that not suggest legislation?

THE CHAIRMAN: Certainly not at this moment. That is a subject to which we could devote a great deal of time; we will not try to discuss it but will adjourn until 9:00 o'clock tomorrow morning.

(ADJOURNMENT 1:15)

Washington, D. C.

February 2, 1937.

The second session of the Administrative General Staff Conference of the Rural Electrification Administration was called to order 9:00 a. m. Tuesday, February 2, 1937, by the Honorable John M. Carmody, Deputy Administrator, Chairman.

MR. CARMODY:

(Remarks off the record.)

(Mr. Carmody introduced Mr. Winder.)

MR. WINDER: It is not necessary for me to go into the details of the early examination of these projects as they come into the Development Division. I think that has been pretty well discussed from time to time. Perhaps, though, some of the changes in the work of the Development Division in the last six months, or since our last report here in conference, might be brought out at this time to show that there is an evolution going on in the determination of feasibility of projects.

Since the early days we have developed a Survey Form which, more and more as time goes on, really represents the ideas of the farmer in regard to his hopes in obtaining some electric service and what he expects to use should he be fortunate enough to obtain electric service. Experience has shown us that certain other elements are necessary on these forms and from time to time the forms have been revised.

One of the elements in determining feasibility is whether the applicant is a tenant or an owner of property. There is a certain discount that might be applied to a man's wishes if he is a tenant; that is, can he afford to have the house wired should the owner disclaim any responsibility? That is one of the things to be taken into consideration.

Another thing is, how far does he live from the proposed line--does he live back 100 feet, or does he live 400 feet, or half a mile. Formerly those things were not taken into consideration in our visa but now we try to get from the Consumer's Survey Form some idea as to all of these elements--

not only the fact that he desires service, not only the fact that he does have the opportunity, by ownership, to go ahead and wire his premises for service, but how far he lives from the existing line, or rather the line that we hope will exist.

There are other elements we should like to have about his annual income, not from curiosity, but whether he has enough income to warrant his making these expenditures for wiring and appliances, which are necessary to the utilization of sufficient power to make the line pay.

Those are all small technical details and when they get into the department in which they are analyzed, there are certain fundamental conditions of mind that must be present before they really mean anything.

Now going clear back to our original conception, the understanding in the Development Division is this--and I am speaking as an adjunct to the Engineering Division always with a viewpoint of the Development Division--we are operating under a certain portion of the Constitution and, I think, under the Welfare clause. We were admonished yesterday by the Administrator, not to hold the viewpoint of the banker but one tempered with a desire to promote the welfare of the people who are expecting so much from us. That means we must look at these reports that come to us with a certain amount of imagination, sympathy and a tremendous amount of understanding.

We know, of course, a lot about the use of electricity in urban areas. We know that if we are going to wire our homes to use 50 or 100 kwh it is going to cost something like $100 and we were advised yesterday that the average, based on a certain amount of information gotten from the Edison Institute, might be $125. That means, if it is true, that there is only going to be one class of rural inhabitants of this country that is going to get service and that is what we will call the "upper income bracket". The lower income group is out, if that holds good, but I am of the opinion no one rule can be applied to the game. We are going to have to apply many rules. A rule that will hold in the areas of the dairy regions in Iowa, Wisconsin or Pennsylvania will not hold in the cotton regions of Georgia, Alabama, Arkansas, or Texas. The rules they need here in Washington will not hold in Florida, and I might say that we are going to have to look at this whole problem with a vast amount of understanding.

In twenty-five years, almost thirty now in this game, I have realized, almost more than anything else, that desire

does not mean you are going to have the demand. The desire is not always crystallized into demand for actual service. If we do not insist upon such hard and fast rules as will hamper that desire, we are going to have a tremendous percentage of these farms wired in spite of ourselves. Just to check that up, last week I made an inspection of rural lines in Arkansas.

These farmers wanted service. The leaders in the area wanted them to have the service. And the two together crystallized in service to these farmers. We found that the average farmer there--there being 1,400 of them on these lines, with an average income varying from $200 to $300 per year--would spend on an average of $40 per year for electric service and be happy to do it. We interviewed them and asked them what they intended to use. We found that they did not use electric stoves or water heaters; they were using all of the other appliances they could afford. They did not have tumbler switches on the wall; and they did not have duplex outlets in the baseboard. I do not know that we even found baseboards. Few of the houses would have cost $500 to build. The average cost of wiring these 1,400 farm homes was $25, and that included a flatiron.

Now the question is this: What enters into the feasibility of the project? It depends upon the understanding with which you study the proposition as presented to you. First, we know what the assumptions are. They are brought to us in the form of a survey. The field man has talked to these farm leaders and he has developed a survey which shows the desire for service of a number of persons in that particular farm area. They next lay out lines connecting up to all those people, asking for service.

The next thing we have to determine in our own minds is how much we can afford to spend for construction, knowing how much they can afford to spend for service. That is the key to feasibility. Now, if these people want and can afford to spend $6 per month for service, and if it is economical for them to do so, we can afford to put in one kind of a line--a line that can serve them with perhaps three-phase power giving each of them special service, such as larger transformers to furnish power for electric ranges, etc. But if we find these people are going to be limited to spending $40 per year for electric service, we should not say "That is not a feasible project". It is feasible under some conditions of construction. We can develop in this organization the type of construction that can be built to render service and pay out on a $40 average income per year....It seems to us that this is a problem to be met. The problem of feasibility is how <u>can</u> we build a

feasible project. The people in the lower branches of income ought to expect, and I believe do expect, some consideration. That means then that if there is only a certain income, we must develop a feasible project not by increasing the amount of utilization by force or in any other way, but by cutting down the cost of operation, cutting the costs of construction and by lowering power costs. The latter is not always in our power, but certainly we could aid by cutting down the costs of construction. Something must be done to get these projects to the point where they are feasible under all conditions.

Now, there are other elements perhaps that enter into the building of these projects, but those all come after allotment. For instance, the question as to whether a particular farm area is being sold on the use of various devices which they can afford to have, is a problem in this early stage, and all we can do is to use our imagination. We shall assume that those things will be done and that they will be done well. We have no right to assume otherwise. We assume they will be done with a certain amount of sympathy for the various farm areas that are interested in the service. And with those assumptions, we look at the figures that are presented to us and determine that with the proper construction, properly curtailed as to cost, with proper sympathetic treatment of these people after construction, which means utilization; with those things properly understood and properly developed, we shall have a feasible project. Now, there are lots of questions that should arise. There are lots of costs that are unquestionably high, of course, at the present time. I am sure that we have not decided at all finally what a project should cost. I have had it brought to me now how cost is influenced if we consolidate two or three counties. This ought to reduce the costs of the projects. As a matter of fact, the larger the project grows the chances are the larger the cost per farm will be. It is easy to see we may consolidate to where we may have an increase in transmission costs. As I say, there is no rule of thumb; we cannot set an ABC formula and substitute figures in that formula and assume the answer is going to give us feasibility or non-feasibility at all. Every project comes to us as an individual problem; it must be studied in the light of conditions that exist in the area, using all of the information that we can possibly get, and even then, we have to look at it with a great deal of sympathy before we can say to our Administrator, "We believe that this project is feasible."

THE CHAIRMAN: Thank you, Mr. Winder. There is a definite idea. If there be some fear that a project as set up will not be feasible, we should, instead of eliminating it, turn it over

for further study to a group of people who will do exactly what Mr. Winder suggests. What kind of construction can be afforded if this project is to be feasible for people in this income bracket?

MR. ADAMS: The question that we are discussing this morning is one which has been discussed in the Rural Electrification Administration since the day it first opened its doors, and, in discussing it, there has been considerable agreement and some rather sharp disagreement. I think the edges of the sharpness of the disagreement would be taken off if we realized that we are all seeking much the same goal.

We all desire the Rural Electrification Administration to have a program which will develop, within the limits of the funds which are at its disposal, the maximum number of sound projects which will bring rural electricification on a sound basis to the greatest possible number of farmers in this country within the limits of the Act which states the boundaries under which we work.

Now, Mr. Winder, in his very reasoned and considerate discussion of this topic made a very important statement when he said the assumptions on which you work are the most important part of your reports; I think that no one will question that in dealing with the applicant and in dealing with this problem that the elements of imagination, of sympathy, and of understanding are vital; and particularly in dealing with the applicant, that the more apparent it can be that everyone who comes in contact with the applicant is working to see the applicant's point of view and is trying to help him. The more that is achieved, the better reputation we shall enjoy in all parts of the country with which we come in contact. This in turn will influence our program.

Now the Act under which we operate provides that the loans for these projects shall be self-liquidating over a period of twenty-five years. The question as to what will make a loan of this type self-liquidating is a hard one to answer. If we were dealing, as it was anticipated that we should when the Act was first passed, primarily with established utilities, with earning power and records, then it would be merely a matter for financial experts to sit down and take figures and earnings to show the charge for this year, determining that the charges will be so much, and then deciding the question as to whether the revenues will be sufficient for that loan to pay out. As it is, the program has taken a turn where we are lending for a given enterprise which does not have any experience

records and there is lacking the usual basis for judging a proposed loan.

There is an important question as to whether or not this imagination, sympathy, and understanding with which we approach this problem are all that is required. If not, we ought, within a few months, to introduce one element which usually is associated with the lending of money. That element is the guidance of experience. A few months ago, we had no experience. With the best will in the world, no one in this organization could formulate a judgment based on experience with similar projects, because the experience did not exist, but we are getting experience. Our projects are operating in different conditions. It impresses me that it would be time and money well spent to examine carefully both into the operation of our projects, and into the operation of projects which are under the tutelage of the TVA--whose conditions are quite similar in many ways to ours--to see what elements are making for the success of those projects which are proving successful, and to see what elements of weakness, whether they be in the territory, whether in the management, or whether in the original cost of construction, wherever they may be, which may make for failure on some of the other projects. I sincerely believe that when we have even a somewhat fragmentary experience, that we can not afford to disregard it. In some instances, I am confident that that experience which we will have will be extremely heartening, and in other instances, it may be a little bit discouraging. And where it does tend to be discouraging, I think that the suggested solution of trying under similar circumstances to find ways to reduce cost, ways possibly to improve management, ways which will overcome those discouraging factors, and will help to drag the project through what might at first appear to be barriers to success.

Now, in discussing the factors themselves which make for success on these projects and determining what makes for self-liquidation, it seems to me that an elaborate list of the various factors is not essential but rather what we need is a clearer understanding of the picture. It seems to me that there are primarily three factors, and when we have those three clearly in mind, that the others play a part in the picture, and that they in turn intensify the importance of these three. We have, first, the cost of the project. It is obvious that if the lines are going to cost $1,250 a mile, and that with the same revenue, the chances to pay out are far worse than if we were able to build the lines for $750. The initial investment that is put into those lines is a factor of primary importance, and the more ingenuity that the engineers can show in

lowering the cost of the lines, without sacrificing that degree of sturdiness which is required to keep the lines over the lending period of twenty years in reasonably good physical condition, the better opportunity there will be to bring down those costs to a point where the project will be self-liquidating. Now, the second factor is the factor of the density of customers which you can expect on that line. Again, that will be apparent.

THE CHAIRMAN: (interposing): Mr. Adams, is that not all obvious. What I want to know is what you have established in your department to give statistics to other people on which they can reach decision. That is what I want to know. The necessity for lower cost and density is obvious and agreed upon long ago.

MR. ADAMS: Mr. Carmody, may I ask you, do you think that it is obvious that you cannot discard every vestige of an analysis which usually goes with the lending of funds?

THE CHAIRMAN: What I am interested in is: How do you go about the business of providing statistical data attached to the folder which Mr. Nicholson and Mr. Herring finally initial? That is what I want to know. This cost business, we have been all through that, have we not? This is interesting, but in view of the short time we have to discuss this and the great number of people we have brought together, we do want to discuss what data are used and how they influence the judgment of our people with respect to whether an allotment ought to be made or not.

MR. ADAMS: Would you consider it out of the province of this discussion to make the estimates on which allotments have been made in comparison with the performance which has been achieved thus far on some of our projects?

THE CHAIRMAN: I do not think there are sufficient performance records yet to enable us to decide whether a project in some other part of the country ought to be allotted. I have seen a lot of figures but I have not seen anything that rests on enough experience. I consider performance records to be of practically no value at the present moment because they are not mature enough. I hope you will tell us exactly how you go about laying the figures that you put down with respect to the incomes of the people in the counties, etc. That would be very valuable to this group. It would be to me. I just do not know yet. Not only are projects being set aside after they have gone through development and come up for financing, but they

are being set aside now in the Development Division because they apparently want to anticipate these turn-downs. To me, this does not look like good sense. We have to get a sound basis for judgment. We have not got it. We have too many different people expressing opinions as to whether or not projects are feasible without exactly knowing. We got one idea from Mr. Winder offering a new basis for judgment. The other thing is, what do we want? I think there is a disposition on the part of all of us to talk here about ideal methods of handling our jobs rather than how we now handle them. If we tell how we now do them, we can then tell whether or not we have a suggestion to do them better. We evolve a better method in which we say we propose to do this differently in the future or this is how we do it now. Any one of us, when he analyzes his job, naturally sees a method by which he can do it better. But it is not always possible to do it. Now, I do not want to tell you what kind of a speech to make. I did not make this program. However, I do want to say--before our time runs away--to all speakers that, if they are not giving us what we need, we are going to ask for it.

MR. ADAMS: I hate to start my story along the lines suggested because within the past month about twenty percent of you have spent some two hours with me questioning me along those precise lines, and badgering me as to this,--questions as to whether or not the stories which were coming in from the field jibe with the figures which we were obtaining from other sources.

THE CHAIRMAN: I know nothing about that. I have not questioned you. I have not badgered you. I have not made a suggestion that this be done, This is purely an original idea. Let us not take it on the basis of badgering or questioning. Let us take it on the basis of our responsibility. There is much to be said about organization. When a man has a job in an organization, he ought not to care about the criticism of how he is doing it, if he is doing it right. I am not worrying about those things. I make more mistakes than anybody else--yes, because I do not take the time or spend all of my life in looking up the answers. I try to use what I have in my head and if it is not enough, I will not last very long. I am only trying to lay down here what I think should be the limits of our discussion.

MR. ADAMS: The reason that analyses are being made of project areas is because every dollar which is paid for electric service has to come from the dollars that the people have who live in the project areas. Now, with that elementary statement out of the way I should like to remove from your minds an assumption

which you may have that the reports which we make are simply no more than a re-hash of census data, and I should like to impress upon you an understanding that they are more than that. I should like then to state that any small group, or any individual who feels that over a considerable area they can determine with far more exactitude, what the precise conditions in that area are, than the United States Census, has not considered what its corps of investigators with the detailed information they gather accomplish; such a group is taking a lot upon themselves.

Now, in analyzing these project areas, we seek to find approximately what the purchasing power in those areas may be, principally that purchasing power which comes from agriculture. We seek, as an elementary precaution, to determine what type of loans have been made in the area and how such obligations have been met, what the past and present income records are and what the future prospects for agriculture appear to be. We have had, over a period of years, conflict, confusion and cross purposes in some of the activities of different agencies of the Federal Government so that in the Rural Electrification Administration I think we all have agreed not to build lines across an area where somebody else is going to build a dam, and we do not want to build lines running into a dead end that somebody is going to take out of agriculture and put to some other purpose becuase nobody was able to make a decent living there. Consequently, we look into the project area from that point of view. Now, we may seem to you to have been in a low suspicious frame of mind. We do not necessarily believe every single statement made to us by every single applicant nor do we believe that every single statement made to us by anyone else is necessarily an objective point of view towards the project and towards the project area. Consequently, to get an outside point of view when we do not have funds for sending our own people into that area, we go through the channels of the Resettlement Administration which has in its possession some of the finest analysts of agriculture and of land and land use problems, which are to be found anywhere in the world. They are under the direction of Dr. Gray who headed the land section of the National Resources Board and he is on the same drought area committee as the Administrator. Through Dr. Gray, we have had the finest type of cooperation. I want to take this opportunity to tell you that one price of that cooperation, which I believe we must pay, is to protect these men who give us the benefit of their experience and their very best opinions from outside pressure, and outside influences, which will undoubtedly be brought to bear upon them if you go back into the project area and say they cannot have the money--that their project was

turned down because somebody from Resettlement said it was a pretty bad area and that they were probably paid by somebody to say that. We cannot get cooperation unless we are willing to play ball with them. We have had the finest type of cooperation up to now. Now, there is no better way to determine what goes into our reports than to read some of them and there is no better way to determine what we get from Resettlement than to read some of these Resettlement reports. They are all in the files. All you have to do is to call up K Street and ask for the file room. Read these reports. You have them all there and you can form your own opinions of them.

It is apparent that those reports by themselves do not provide the sole criteria for judging the feasibility of a project. Mr. Winder covered the others and if there are any questions in respect to what we do beyond what I have told you, I shall be very glad to answer those questions, but in concluding, as Mr. Carmody says, everyone who takes a job should be willing to stand by any job that has been done. I suggest that it would be very helpful if, in passing on the future projects, estimates on which the previous allotments have been made, might be examined in the light of both as to how many customers promised to take service for that project and how many actually are on the lines six months after operation and as to what the consumption was estimated to be for the average customer, and what consumption has been achieved after six to twelve months of operation. Now, you can discount that, and quite probably should, because you will say we are still building load. But if ever you find that in one region there are only one-half of the estimated consumers and one-third the estimated average consumption realized after operation and if in another region of the United States you find that those projects which are in operation show that you have eighty percent of the estimated customers and eighty percent of the estimated consumption, I think that in considering the feasibility of future application, that the benefit of the doubt should be given to the latter group rather than the former. Thank you.

THE CHAIRMAN: I apologize for appearing to badger you. You have made a very fine practical contribution to this discussion. I subscribe 100 percent to the last statement--to the effect that this comparison must be made. That is another thing which is perfectly obvious and if we are not doing it, it is Mr. Adams' job to get those data on a wholly comparable and current basis.

MR. NICHOLSON: Mr. Carmody and members of REA. I propose to talk in a dual capacity. First, as a lawyer and second, perhaps I might say as my own client. I share, of course, with

all of you the interest that we all have in the attainment of the proper social objectives of our Act. Essentially, there is no conflict between the approach that a lawyer makes and a lawyer's client makes to any given problem. The lawyer, must, if he is a good lawyer and gets a fee and keeps his client, attempt to do in a positive constructive way, so far as he can, the things that his client wants him to do.

There is just one other general observation I wish to make because it bears very directly upon what I want to say more specifically later. There appears in our organization a certain tension between the technical and non-technical approach and between the technical and non-technical personnel. Now, that is very wholesome. It gives life and snap and balance to an organization. It is somewhat like the tension that you have in a complicated, delicate machine where metals have to have just the right tension and relation to each other,--not too loose and not too tight. Now, in our own organization, we have these two approaches to such a problem as we are considering this morning. Each group in our organization has its own contribution to make and each is equally important. There is the technical man who has to deal chiefly with facts and with careful examination into the interrelation of facts. In building a dam, an engineer cannot do much guessing. He cannot draw too much on his imagination, particularly if he happens to live below the dam. The analysis of water pressure and the strength of materials must be exact. Yet the dam would probably never have been started without the imagination and elan of spirit on the part of those who conceive the idea of the dam. So it is in our own organization. We have one group which furnishes one contribution to our enterprise and we have another group which furnishes another contribution, and the two ought to have a very wholesome and self-respecting interplay.

Applying that general line of thought to the consideration of this problem I shall speak first in my capacity as a lawyer. We operate under an Act which requires that our projects shall have adequate security and shall be self-liquidating. I am sure Mr. Winder will forgive me and thank me for correcting the reference he made to the General Welfare Clause of the constitution. Under that clause, we could give this money away if we were allowed to. We could make 100 percent grants. That is not the problem with which we are faced this morning. We are operating under a statute which says we cannot do that, that the projects must have adequate security and must be self-liquidating. I am not interested here in the problem of ethics as to the proper attention to be paid to provisions

of law. That is a personal problem. I am interested however in the problem of intellectual honesty. There is a virtue in intellectual honesty which affects the whole of an enterprise. There is something of vice in a lack of intellectual honesty that is equally pervasive. The immediate problem under discussion is whether under our act these projects are self-liquidating. I am interested that all of us shall bring to that problem proper measure of intellectual honesty.

My interest in the body of data that comes to me is primarily the interest of an attorney in the analysis of evidence. It is not an impossible task to take the evidence in my files and reach a reasonably adequate conclusion. All of us do it in our own personal affairs. If it were our own money that we were lending, or if each of us were in any danger of surcharge for the lack of proper judgment on these problems, we would not have any trouble in reaching a decision on this data. We would analyze it and reach a conclusion. I do not mean that we should bring to bear the same standards of judgment that we would if it were our own money, but I mention that analogy as showing that it is entirely possible to reach a satisfactory conclusion upon questions of this kind even though the criteria are not sharply defined. Now, as Mr. Carmody has said, many factors are pretty well determined and pretty well standardized. There is not very much variation even in density. We find that three to four customers per mile is an average that seems to spread out over most of our operation with just occasional wide variations from that average. The only point at which there is an enormous variation is the farmer's income, and therefore, his ability to pay. That varies as much as two to three hundred percent. It is the chief variable that we find in these projects, so that I have regarded it as the most important part of the economic analysis so ably gotten together by Mr. Adams' staff.

The other factors are not particularly variable. They are about the same with all projects and, when we try to compare one project with another, when we decide whether the project fits into one Act, when we ask the Administrator to sign the certificate under the Act, the chief point of inquiry is, I feel, the matter of the farmer's ability to pay.

My chief interest is that there shall be in our records a body of evidence that is persuasive and reasonably consistent. I am not interested in my own inquiry in reaching my own independent conclusion as to whether I should consider the project feasible. It is recommended as such when it comes to me and my interest is very much that of a court of law in

passing upon findings of fact as to whether there is any reasonable evidence to justify the finding. I cannot be quite as limited as that because I am not sitting as a court of appeal. I am part of the organization and Mr. Cooke looks to me along with others to support the finding that he signs under the Act. So in one sense, I, myself, am implicated in the making of this finding, but my approach generally is to see whether the evidence in the file hangs together.

In a great many cases, it is apparent that the average cash income of the farmer in the county or counties where the project is to be built, we shall say, is $500 to $600 per year. Now, does that mean that he has that much money as a fund out of which he can draw for the purchase of appliances and payment for electric energy? No, because a certain portion of that has to be spent in the operation of his farm, whether he has electricity or not. He cannot live, he cannot exist on his place without spending a certain amount for the operation of his business, and thus you come to the figure of a net income, which in usual business statistics, is the only figure which has any significance at all. We have to look at both of these figures, the cash income of the farmer and the net income because it is true that the farmer, by the use of electricity, eliminates some of this expense of farm operation, so that he is not limited in the money he has to spend for electricity to what you ordinarily call his net cash income. I understand that our statistical people have been rather conservative, however, in arriving at this net cash income. Instead of deducting their estimates or the Census Bureau's estimates of the total cost of operating the farm, they deduct only sixty percent of that cost, and you have to take that factor into consideration. Thus if you find that the net cash income of the average farmer in an area is $300 or $400 per year or less, and if it appears in our records that to make this project pay out those farmers must pay an average of $50 per year for energy, you have a body of data which, if unexplained by anything further, just could not support a responsible man's finding that the project will pay out. With an income of $300 per year, you know that the farmer is not going to pay $50 or $60 a year for electrical energy. There may be exceptional circumstances where he might almost starve to death, in order to use electricity. But it is not only a matter of purchasing energy--it is a matter of buying enough appliances to make the project pay out and that involves several hundred dollars of expenditure.

It is often said and, I think, very truthfully, that this average figure for the county is not an average figure for

the project; that the project lies in the best section of the county. But unless that appears in our record, and unless there is a statement there by somebody who knows and has indicated in the record just how he knows, it is just the merest guess work and wishful thinking. There have been cases where our records show that instead of the project lying in the best area in the county, it seems to lie in the worst area or at least not in better than the average. You have then to take these average figures.

In dealing with such a very significant fact as the farmer's income which is the chief variable in all of our projects, the evidence must be persuasive and consistent. I saw in one report a reference to the fact that the farmer's saving in the purchase of A and B batteries for radios would help in the purchase of electric appliances but when you find that less than two percent of the farmers in this area have radios, you see that the argument is not persuasive at all. I remember another, the statement intended to prove a higher level of income than the very low farming levels to the effect that a large percentage of the project customers live in small villages. But that is not evidence of feasibility of the project. The village customer, however large his income, is liable to be a very poor customer for electric energy. There are lots of people in the cities with incomes in the five figures who do not spend enough for electricity to keep a rural line going. Thus it is not only a matter of attempting to explain, modify, and orient the economic information that may be adverse in its significance; it is a matter of doing it in some persuasive manner that actually gets into the record.

The best way to get at the figures for our projects specifically in contrast with average figures for the whole county is to have surveys made for our own purposes and preferably by our own people. When that is done, however, it must be sufficiently significant to constitute evidence, the kind of evidence that anyone of you would act upon in investing your own money. If a survey is made of the project and detailed facts are accumulated, they must appear in our records. If the survey has been made in only ten percent of the project, it is just not worth anything as evidence supporting the Administrator's finding unless there is good evidence that this particular ten percent is typical.

All of us are implicated in this matter, and I think we should face it with an attitude of mind as though each of us were signing the certificate. The Administrator must in signing it rely almost wholly upon our recommendations to him. Those

of us who affix our initials to the paper that Mr. Cooke signs, in turn rely upon the recommendations that are given to us. Of course we have to be imaginative in our interpretation of these data. The only excuse for our existence is the performance of a public trust. We are in this business because private capital is not in it and, as Mr. Winder stated, that necessarily must color all of our interpretation of these data. But there is a certain minimum of detail below which you just cannot work. There are certain data which do not lend themselves to any type of imaginative treatment in order to get a given result and that is the problem with which we are concerned here. I have not mentioned everything in which I am interested as I do not want to take too much time.

I want to emphasize in closing, out of my considerable experience in analyzing evidence, that the fact of most importance is the farmer's ability to pay. If the farmer has the money, and the farmers in the best agricultural regions do have, the project is going to succeed, assuming the validity of our other findings, which, as Mr. Carmody says, are pretty well standardized. If the farmer does not have the money with which to buy appliances and electricity, then obviously the project cannot succeed, and thus I think our major interest in this problem is what the farmer can afford to pay. To date, our data have not been as good as I am sure they will be in the future. In a good many cases, there has been evidence directly contradicting our finding as to what the farmers will spend. I have seen cases where $5 per month was necessary for pay-out and the majority of the customers by their own signed statements said that $3 was the maximum amount they would be willing to pay. When the time comes, they might well spend $5 but the trouble is that that is not in our record. There must be proper evidence to support our hope and faith that in a given project the farmer will spend enough money for electricity and for appliances. Where average figures from other sources are not encouraging we must seek evidentiary material based upon a scientific survey of the particular project.

THE CHAIRMAN: Thank you very much, Mr. Nicholson. Before we go too far, we ought to say for the record what a magnificent job the bankers do and how much they may lend. Have you been reading the papers in the last few days and following Senator Wheeler's inquiry into the operation of the Van Sweringen brothers? There is an excellent example of how bankers (in this case large bankers) and leading New York corporation lawyers check the security behind loans. In the case under review more money is involved than we shall lend this year.

I think you will understand that the bankers do not always know what they are doing. When you can buy thousands of miles of railroad for $284,000 because the bankers made unwise loans, even the House of Morgan participating in it, I think you will have to realize that we have to discard some of the standards used by bankers; and I am beginning to think as I listen to these discussions, and they are very illuminating, one of the things we can do to find out if these farmers can pay their loans, will be to talk to the country bankers who have already made loans to these farmers on livestock and other similar security. I am beginning to think that if we pay more attention to the country bankers in the county seats and, if there be good lawyers there, to them, we shall at least get more material that might look good on paper and we shall certainly get some ideas that will be very helpful.

Now, the difficulty, Mr. Nicholson, as I see it, in the philosophy of lending money which has not a good security for the loan, does not make a good case for this. I cannot blame anybody for not approving some of these projects. I do not know enough about them myself. The only case I know of required me a full day--one whole day--to read every single paper in that file, and when I got all through, I confess to a very considerable amount of confusion. When I make a decision, I try to weigh the evidence as I find it; and I find that the people who can build their hopes on other hopes that the farmer would use more of this energy when it is made available and made quite apparent that it would justify its cost to him, had not made a very clear case. They had not taken the trouble to document such material as they had. I am not a lawyer, but I have spent some years on what might be called a quasi-judicial bench where cases were presented by able lawyers from all over the United States. It was part of my duty to make up my mind--to get my decision recorded in a document that might be reviewed by our higher Federal courts. There is a very real need for coordinating some of our facts with respect to the manner in which we must present the best available material we have.

Now, the Statistical Section does have ability to put all of this material right on the line and finally summarize it on a single page. That is what some of the other sections have not done.

MR. SWANSON: I am going to try to keep on the subject, but this is going to be hard to do because I have nothing to do with feasibility. I do want to say just this, that we get a sort of "look-in" at the time that Mr. Herring goes over a project and at that time both he and Mr. Nicholson see the statistics that

have been gathered. I want to say, in opening, that we are willing to accept the challenge that Mr. Winder has so graciously thrown out. The borrowers should keep in mind, at the time they begin to think about a project what they propose to use in the way of materials and how they propose to build the lines and whom they want to serve as their engineer--a few things like that. However, they should not make any commitments. May I dwell on that for a moment, Mr. Carmody?

THE CHAIRMAN: Go ahead.

MR. SWANSON: It may be touched on a little later but I should like to get it started now. It does affect the feasibility. We find oftentimes, when the project comes to us, with the folder--that the farmers themselves have concluded what they want to use as a conductor or that this particular individual is to be their engineer. Unfortunately, both of those conclusions lead to much difficulty. We have nothing against any particular engineer, although we like to get the best consulting engineer that we can in the area. It helps to make progress, when you come to determine the class of conductor, if you know something about the circumstances under which the lines are to be built. If the roads are crooked, you are going to come back to a shorter span and a different kind of conductor. I think you will have to admit that the engineers--I am not talking about our engineers but engineers generally in the United States --have contributed quite a bit to rural line construction. When you realize that this size and type of program is wholly new in the world--there has never been such a program with such tremendous volume ever planned. When you turn over to a contractor the job of building 200 or 300 miles of lines in three or four months, really more lines than most power companies build in a whole year and with construction contracts on a similar scale, obviously, there are a lot of factors that have to be weighed very carefully.

A program of this sort got under way in the TVA--and I might say that when that program was started I, along with some other engineers from our organization, was there. We were faced with $2,000 per mile line construction costs, which we oftentimes like to call a Christmas tree type of job, such as the Electric Bond & Share Company have been advocating for years where they would attach as many gadgets as they could to a rural or urban line.

THE CHAIRMAN: And on which they get plenty of money from the bankers.

MR. SWANSON: Just carrying that for a moment, they were quick to recognize the fact that if they bank a dollar they could only get three percent whereas if they would hang it in the air, they could get twelve percent. That is why the manufacturers' catalogues are so thick--they have so many gadgets. It has been quite a job to break that down. When the TVA engineers and other aggressive power company engineers hit on the happy idea that they should go to a 6,900 volt line with grounded neutral, right away all sorts of things were introduced, particularly by the manufacturers themselves and it took them but a little while before they recognized that they still had a field in which they could get business.

I think in our engineering organization, through the good offices of Mr. Richter and others, we have introduced some very novel ideas. We are not taking credit for any of it, but any number of little gadgets have been cut down in cost, others eliminated and others turned over to manufacturers and they have been only too glad to do it. That has tended to reduce the cost of construction. When you come down to feasibility, maybe the first thing which faces us is what is going to be the cost of that project as it comes to us. Now, I recognize at the time Development passes upon it, there are many unknowns. You have to do what the folks tell you and you cannot tell them they are wrong. But when we get the plan, we actually must find out if the layout as put to us is possible of construction or not. I hope you will not feel that we are critical when we say that this thing will not work. Engineers are blunt, short, and like to come to the point.

Now, there are a good many things that, in our opinion, should enter into the feasibility of a project, but maybe when Mr. Herring gets back, he will have an opportunity to go into that, as it is really his responsibility and not mine.

The thing that seems to disturb us a great deal is the fact that they elongate projects too much. If you can build a project in a circle, you are getting a much better proposition than if you go straight down a road. Let us develop that for a moment. You can only distribute electricity just about so far on a given voltage. It so happened that the private power companies in going into the rural business were slow to recognize the fact that 6,900 volt service should be used for longer distances. They did try to drag that 2,300 down the road too far and when refrigerators and ranges were attached, they just did not have the energy to pull them. It so happens that with 6,900 volts you can go a nice distance back, and when you get beyond twenty-five or thirty-five miles, you are getting pretty close to the limit

unless you use something in the way of regulators which at once adds to the expense on the project.

QUESTION: Did you say twenty-five miles is the limit?

ANSWER: Twenty-five or thirty-five. You are getting pretty close to the limit without going to regulators, when you get beyond twenty-five miles. If you gentlemen want to do us one favor, you could bring to us a tabulation of the customer applications and divide them into areas, probably of a ten, fifteen or twenty mile radius from a given point which, let us say, would be the power supply. That would give us some idea of the loads in the area. As it is now, we have to take the maps at the time the plans come in from the engineer and we have to assume the given loads of the various customers and find out what the voltage study will determine and whether it is possible to go out there with power or not.

Now, when we get a project where there is a great deal of three-phase construction, obviously you are getting into a wholly different problem. I am afraid among the development men or within our own organization, the tendency is to get away from rural electrification. I am afraid the engineers for these sponsors are going high, wide and handsome. To obtain coordinated or integrated projects taking in several counties, we are getting a large amount of the transmission lines. I have one project in mind with a very heavy load to be tied in. That is getting rather far away from rural electrification, so we continually have to keep after these engineers to stay on rural electrification.

When these projects come to us, they are supposed to be feasible, according to the information that was turned into development from the various groups that analyzed them, but when we get the plans and specifications from the engineers, we find that they have actually picked the project up here and set it over there. I have one in mind which I think we sent back to the Development Division last week. This project was supposed to have been developed over here, because of the interference of the power company. They have actually moved it over here. What does the Development Division have to do now? It might be in cases like that that they will have to go back and rework the whole project.

I want to say just a few words about manufacturers and what I might term opposition on the part of their representatives. I do not know what we can do about it. I should like to believe that it is possible to keep these projects pretty nearly sacred from the manufacturers. I do know, however, that the

manufacturers' representatives seem to find out a whole lot about these projects pretty early in the game. We understand they are following the development men around and finding out where they are building projects. I do not know where they are getting the information except that put out from the Information Section.

QUESTION: Is the project you refer to, 21 Milam, in Texas?

ANSWER: Yes.

QUESTION: Do you know how much time elapsed? The power company could have easily disrupted that project so it would have to be redeveloped.

ANSWER: You see the plans and specifications just came in. It so happens that there were quite a number of individual factors, such as loan contracts, power contracts and plans and specifications.

QUESTION: You were very fortunate if we had nothing to develop after that time.

ANSWER: Texas is a very big State.

THE CHAIRMAN: There does arise the question of how to keep track of the project in the field up to the time that the engineers are actually ready to work. The question is whether the engineers shall reach back and get it at the time development renders it to allotment.

QUESTION: I should like to get this point of manufacturers off my chest. I wish there was some way in which we could keep them out of the area, at least for a while. They do give us a tremendous amount of difficulty as you can well appreciate. They go out there and get hold of a few of the good farmers and they "get them sold" and, as somebody said, these farmers are inclined to be bull-headed. It has been extremely difficult for us when they finally select an engineer and he proceeds to draw plans and specifications and they come in to us and are unwilling to give free and open bidding. The engineer has his mind closed. He is not going to permit the use of that kind of transformer and that kind of metal, or that kind of conductor and is dead set against it. It takes a great deal of time on our part to open up specifications because the Administrator insists upon free open bidding, the public opening of bids. The manufacturers have taken this position: who are we in Washington to tell them where they shall go and sell their goods and who are we in Washington to pass upon the application of goods. They have a

good point there and far be it from us to stick our necks out in passing upon somebody's project as being good, bad or indifferent. There may be a field for everybody's product. When you come to the matter of conductors, you are getting into a debatable subject as to cost. There is quite a difference in price. We are leaning toward the lower costing transformers which are more readily available for the rural type of construction. I don't think it is necessary to go to more expensive types and particularly with the ground system, we don't need that type of production.

I just wanted to bring in a thought that is coming up from our engineering group and that is this: We find that in the minds of a large majority of the outside engineers--I believe not 100 percent--there is beginning to creep the idea that there is less and less need for protective devices for rural line construction. It seems that it is a thing we must come to and I know in our limited inventive section that Mr. Richter is handling, they have developed a few little things, coming through the mill now, which will assist in reducing this major line construction cost, particularly protective devices. The manufacturers are not agreeable to that. They recognize immediate losses in business. It is wonderful promotion talk for them to corner a group of folks and tell them all of the horrors of lightning and what it will do to your lines and what can be saved by hanging their particular gadget on them. We are taking that with a grain of salt. We are going to tell these boys we do not think they need those things any longer. That is really all I have to say. I am sorry I cannot discuss a great deal about feasibility.

MR. FALKENWALD: Mr. Swanson, you mentioned that you would like to have a project developed in the loop area instead of a straight line. The development man does not pick out the farms. We actually have a survey made and the particular farms are spotted on the map. It so happens that in the majority of cases they run in straight lines.

THE CHAIRMAN: They can radiate without a loop.

MR. FALKENWALD: I should like to have you make a suggestion how we could tie into a loop..... If the farmers want it, how would you suggest that we develop it?

ANSWER: I could only suggest that you talk it up. In talking to these farmers, you should not go down much beyond twenty-five or thirty miles but should go this way and this ordinary way and then finish with a spider web. I do not presume that you should

actually spot these farmers and tell them who can or who cannot get on the line.

MR. FALKENWALD: The way we develop it, each township develops into an area. The majority of projects are developed in townships, the farms are spotted on the maps, and are numbered in townships from one up to whatever it may be. The surveys will give you all important township information. I think we have that knowledge in the various divisions. By using that information, you could estimate your load without using any further assumed figure.

ANSWER: When you have this information, what do you do with it, look at it or file it? Do you tabulate it or put it in some sort of chart form? It would be interesting, Mr. Carmody, to know where that information finally ends.

MR. FALKENWALD: The surveys are all kept in the township classifications for the projects in development.

MR. FISHER: May I say something to Mr. Swanson before he leaves? I think Mr. Swanson has made several contributions here which will help the Development Division, particularly if he follows them up with conferences and counsel with regard to the project. I think that one of the difficulties has been that we have not conferred enough about the standards that each of us is using. It often comes out just as a flat contradiction and rejection of the work we have done without knowing why. I think it is quite possible for us to give Mr. Swanson the analysis of customer use of areas from a certain point. It will take a little more engineering and analysis in our own section. We have not a great deal of engineering experience. I think perhaps Mr. Swanson might designate someone to work with us on that, long before we submit the project. We have never, to date, so far as I know, been requested to furnish opinions as to engineering feasibility. Ours has only been economic information from an engineer's viewpoint but with respect to economy and not engineering. I think we are prepared to go a little farther, as Mr. Swanson seems to suggest, and offer lay-outs which will make his task easier with regard to the three-phase of single-phase construction with respect to the voltage of the lines, etc., and location and source of power. If we are invited to do that, we can entertain a correspondence with the project sponsors and get these things in better shape than we now submit them.

I think it is quite feasible to do that and quite possible. I like the point he brought up about the manufacturers' interference. We have met it right here in Washington where the

manufacturers have set up bureaus and the way these men swarm our offices has almost come to the point of being pernicious activity. I know how many times I have been invited to lunch and to conferences until I have a mind to give them the cold shoulder. I can imagine how it is being carried on in the field and I think it is something we have to fend off. When the proper time comes, I should like to ask some questions about Mr. Adams' talk.

MR. BACON: I should like to ask something about this engineering work because one of the problems I have in the territory in which I have been is the selection of the engineer. The local organization has no idea of any consulting engineer that they may call on. They send in this project and then the first thing I know, one or two engineers have been recommended to them and they are pretty clever. They always find somebody who does not want to recommend those fellows. I think that there ought to be compiled a list of engineers that the field man could have to show to these project people to the effect that there is such and such a group available in this territory. In other words, I do not believe it is economical to have an engineer from Philadelphia working on a project in Alabama. That is too far away and it causes antipathy because these fellows come down to work before you get out of the town, and, unless the field man has cautioned the sponsors, one engineer is as good as another and hard feelings result.

THE CHAIRMAN: You mean the engineers selected?

MR. SWANSON: Where an engineer works is not of any moment. Burns and McDonnell is an engineering firm that operates all over the United States. It is not an uncommon thing for an engineering concern such as that to establish branch offices and they can operate in Alabama even though their home office may be in Kansas City. As to a list of engineers, there comes a time after the project has passed the stage of allocation and the contract is in the process of preparation, that we do send out to the sponsors a series of bulletins telling what to do and when to do it. With these bulletins is a list of engineers who, we believe, are available. It is not that engineer who causes us trouble; it is the home town boy. They get him in as an engineer or manager or something and it is just impossible to get them to understand that he just will not get a job done in a month or week, whereas if they bring in an engineering organization, they can fuction with some speed.

THE CHAIRMAN: May I say this on that question? Mr. Swanson is discussing that later, I think. One of the reasons that the

afternoons were left open was that we might do our work at our desks. The other reason and a reason that weighed most heavily with me was that some small conferences might be carried on in the afternoons between the many groups that had special problems to work out. For instance, I think it would be well for all of the development men to sit down with Mr. Swanson and whomever he may designate and discuss that question of how it would be best to warn the sponsors against selecting the wrong engineer and succumbing to the wiles of the manufacturers' representatives who come to see them using expert arguments of all sorts and resourcefulness with which the farmers are wholly unfamiliar.

First of all, you cannot keep this business secret. Success depends upon publicity and not on secrecy. Second, no matter how you try, you could not keep the vendors from sending flocks of their salesmen, called research men, out to the projects and to the engineering staff here. We are on perfectly solid ground, it seems to me, legally and morally. Under Government regulation the contract must go to the lowest responsible bidder. That is number one. Number two--I think that the field men can be quite as persuasive as anybody else in having the sponsors accept as a fact that entirely apart from the necessity for protecting our loan as Government trustees, we are normally their best friends and certainly no manufacturer, many of whom contributed to the fund that endeavored to prevent the passage of this Act, can be looked upon as a better friend of the sponsor over twenty years than the REA. Let us use that as an argument. You men in the field can certainly persuade these men that before they make any commitments, they should come to the Rural Electrification Administration because here they will find friends. On our side, in our dealings with them, we must persuade them from this end that even though our advice sometimes may appear to be bitter medicine, it is given by their friends. It is not always necessary to make medicine bitter. Engineers are blunt to their own very great disadvantage and I say this after having belonged to several engineer societies over a period of years and having dealt with them all my life. It is about time in this modern world of ours that they sloughed off their bluntness and put on some of the coatings that the lawyers have put on. Nobody can be more blunt than a lawyer if he has to be. The character of his dealings in the world would tend to make him blunt, but he does not meet issues that way at all. He begins in school and continues after he leaves school to acquire skill in the practice of diplomacy. You know that their incomes are larger than that of the average engineer all over the United States and their prestige is a thousand times more in making the laws of the United States where in our National Legislature there are perhaps 400 lawyers and not an engineer. The engineers decry it; they put one in the White House and what happened? He was so blunt, they chased him out. Let us

understand that bluntness is wholly unnecessary. I am beginning to think that it does not apply to the whole profession but only to those of us who have not found out that bluntness does not pay in any sense, not only financially but in our ability to accomplish things.

It is a very great privilege to be here. I dare say many of you recognize it as a privilege to be a part of an organization where the intellectual tone is what it is in the REA. We have an opportunity for association that the average young man or business executive does not have. We have a large corps of engineers, a large staff of lawyers, economists and other whose objectives are necessarily high because of their training and the kind of work which they are called upon to do. Let us see how these lawyers work and how they persuade us against our wills to do the thing which in the beginning we did not want to do at all. I am going to make this definite suggestion to you and these development fellows. Here is what we ought to be working toward. I do not know whether it is possible or not. There are some 3,000 counties in the United States. We should be engaged in active research to determine the economic status of all areas in advance of development work. We should coordinate our data and then lay them on top of the map on which these data would be spotted, not in figures, but on a map large enough to spot every potential customer; then we could lay the present utility maps and show areas, and even individuals who are served, and see what part of the area remains. We could then either quickly appropriate funds ourselves to cover unserved areas or find out what part the utilities were going to supply; then we would be doing a first-class job. Many of our present frictional problems would be eliminated by that process. We are not ready to do that completely. We are ready to do what we can with what we have and if the engineers will sketch out a plan roughly and set down the figures and the limits beyond which you cannot go with normal transition facilities--it can be done; it is a matter of coordination--then I think we could begin to make progress. I wish you would talk about that this afternoon or whenever both of you can spare the time. Now, this manufacturer business is something we shall talk about. We may have to use some of the diplomacy which the lawyers possess to get an understanding, at least to take the savagery out of it. It is not a form of intelligent commercial enterprise.

(Fifteen minute recess)

THE CHAIRMAN: Mr. Nicholson has been called to the office by the Administrator but he is staying for a short while in order that he might answer any questions, concerning the subject he discussed, that are in the mind of anyone present. Will you please ask them. If not, Mr. Nicholson would like to be excused.

MR. LAKE: I should like to ask one question. The question in my mind is this. Mr. Nicholson talked on statistics and so did Mr. Adams. Just how much do these statistics mean? We are doing something that everybody told us could not be done--so how far should we go on with these statistics is the question in my mind? I should like to ask if there is a definite point in the income of a group that eliminates their chance of getting a project other than if they are going to be resettled? On the east side in New York the New York Edison Company and other electric companies run right into the poorest sections of New York City. The same is true in other cities. I am wondering if we should say that some sections should not have electricity because they have not enough money, or do not make enough money.

MR. NICHOLSON: As Mr. Cooke has often said, we are doing just a small fraction of electrifying rural America--about ten percent of the total job. The question of subsidies, grants and other factors to complete the program in other years, is not our problem--our problem is to choose perhaps that ten percent of rural America which is now ready for electricity under the requirements of our statute. We cannot go on the theory of taking electricity to every farmer that wants it--obviously not. Now, the people on the east side of New York do not need to spend very much for electricity in order to make business successful. The farmer has to spend a somewhat higher amount because there are so few farmers per mile. When Mr. Cooke signs the certificate, as required by him by the Act, namely, that the security is adequate and that the line will be self-liquidating, he has to have something upon which to base that opinion. That is just the ABC of administrative action. Nor could he base it upon his own general opinion of what farmers are likely to do. In order to do that, he would have to write out a review of each project. For the basis of his opinion he can't just pick it out of the air--he must have evidence upon which to base a finding. Imagination cannot <u>create</u> evidence, but it can <u>interpret</u> it.

Statistical information has to do with all of the factors that seem to indicate what a farmer can spend for electricity or what he cannot spend. It is not highly complicated--one must just think how he would act in his own personal affairs in determining a question of this kind. The saturation of automobiles is always significant. When I find in a project area only a 25

percent saturation of automobiles it immediately raises a question that has to be answered--it may not condemn the project, but it certainly does not endorse it. An automobile is today almost an essential item for a farmer, and in many of our projects the saturation is as high as 85 to 90 percent. When it is down as low as 25 to 35 percent, then we know that 65 to 75 percent of our consumers have not been able to buy even a second-hand Ford. The question has to be answered as to how they are to pay the $300 to $400 for appliances and to pay for the use of 80 to 100 kilowatt hours per month. I do not mean that any single fact is conclusive one way or the other---this automobile saturation and the saturation of other things which are almost as essential to a normal agricultural economy--they are not conclusive, but they do point one way or the other. If they are favorable, that is fine. If otherwise, it must in some way affect our views.

THE CHAIRMAN: I realize, Mr. Lake, that that is an extremely difficult question to answer. As it is today, we judge a man's worth largely on whether or not he has an automobile. There are more than 25,000,000 automobiles in use in the United States today. Within my own memory and perhaps within yours, once, a man who thought of buying an automobile was looked upon as a fool. In fact, no banker would lend him a cent to buy an automobile. The automobile manufacturers themselves did not borrow money from the banks in the early days--they peddled their stock from door to door. The bankers would not lend money for the automobile business, because people could not afford to buy them; their incomes were not large enough to warrant automobiles. Now it is not possible for us to decide this REA question--this question of lending money--in one year or two, any more than the automobile business could be developed in one or two years. I myself remember when Henry Ford drove his gasoline buggy down the street and he had to push it halfway. The people in Detroit who are getting their largest incomes today from the automobile business laughed at him. We have just got to use some common sense in this respect. It is not the early promoters of the automobile business--like Flanders and Durant and others who really contributed valuable ideas to the automobile industry--who are reaping the benefits of the business--it is the people who twenty-five years ago had no interest in it--not one of them except Henry Ford. The rest of them are all washed up. It may be the same here, but our problem is to place that loan that you are talking about--that is what we are trying to do. Every day the Development Division is attempting to do this, the economists are attempting to do it and the men who must initial this or that proposed allotment before the Administrator will sign it are trying to do it. They are trying to do it by a fundamental process--they wish finally to arrive at a conclusion as to what does constitute a

project that we ought to lend money to. Now you take the county of Crawford--it is very hard to tell how much energy will be used up there. I dare say from some of the figures that have come in in early days the whole thing might turn out so that we may only get one-third of the investment we ought to have there. How they will turn out--you just cannot answer this. Nor is it being answered by our general discussion here. You have a question, Mr. Pyles?

MR. PYLES: I question Mr. Nicholson's statement that customers in certain sections who have only $200 to $300 income could not use over a certain amount of electricity and that they have signed statements that they would only use three dollars' worth of electricity a month. This is not the customer's statement. The survey signed by the customer states that is the minimum bill he is willing to pay, but does not say that is all the current he will use. If that is used as a factor for determining how much he is going to use, it is wrong.

MR. NICHOLSON: I was referring to several surveys in which the great majority of customers signed statements, giving about three dollars as the maximum amount they would pay.

THE CHAIRMAN: There are some just the opposite of that, Mr. Pyles. There is a statement that some farmers have signed stating that that was the maximum amount they could pay.

MR. PYLES: About these $200 and $300 incomes. I have gone over certain information with Mr. Winder and we have examined some of the territory in Arkansas where normally it would be supposed that the farmers could not use the current found necessary and could not afford to buy the necessary appliances. We found that there were a great many instances where these same farmers are connected with electric service now and using between $40 and $50 worth of current per year, and have electric refrigerators, washing machines, irons, etc. We have photographs of these houses showing that they are very poor dwellings in run-down condition, and would be considered by the Legal Division as unfeasible economically.

MR. BOYD FISHER: This is not really a question and it will not be necessary to answer it. I should just like to present a point of view. Mr. Nicholson, of course, in the brief time that he talked, could not develop all of the provisos, the admissions and concessions, but if we would all just try to realize that if we were to consider the feasibility of projects on the basis of the average income of the farmers of the counties, it would give us a very definite picture and a much different picture than the average project, which is from a selected group of farmers. I

had a map made the other day, a colored map, showing the territories in the United States that would be feasible for the development of REA projects. If we study this on the basis merely of the counties' average income, that on which Mr. Nicholson approves allotments, I am bound to say that taking the area east of the 100 meridian mark where our active work has been, two-thirds of the territory over this area would be declared, in advance, as being infeasible. If we apply the standards by which we have been rejecting projects in this area, two-thirds of it would be wiped out in advance. Mr. Nicholson would not wish to rule out two-thirds of our potential projects in advance. It is absolutely necessary that we have a better selective process.

Mr. Nicholson, Mr. Adams and Mr. Swanson have discussed the feasibility of projects. The impression growing out of this in my judgment is that today the Development Division has not made an adequate presentation of available facts. I do not take it seriously. I do not resent it. I do not take it as unfavorable criticism. I take it as something that we have to talk over in our division--how to develop this thing better.

We have attempted to improve our basis of information and there has been a very serious effort to do a better job. We have a Miss Liter on our staff whose job has been to analyze the customer survey blanks in our own projects and every effort has been made to take her away from us. I feel that this analyzing is a very proper part of our job. When the entire analysis of a whole county is not adequate, we should be permitted to make the kind of detailed and thorough study of our project customers which will seem evidential to Mr. Nicholson. Now, if we are going to consider the number of automobiles as a criterion, I am going to ask our men to put on their survey blanks in each State whether the customer has an automobile or not, what year and what make it is, the price paid, whether he owns it or not or is just paying for it on the GMC plan. We have already analyzed the detailed survey blanks where farmers have told certain things about themselves, but I am willing to get a credit rating on these farmers as well. Mr. Ford of Mississippi has actually suggested a plan of getting a committee of three--the doctor, the banker and leading grocer--to be a credit committee on each project. We can get you that. We must not reject the entire South, the entire middle South, the whole southern area of Ohio, entire Virginia and most of Maryland, a large part of Pennsylvania, etc., as we should be forced to do on the average figures we have been getting. In fact, we must be required to get whatever data, with regard to individual customers, will satisfy the extremely cautious, as well as data concerning the character of the signers on these projects--which will show that these particular farmers can afford to buy electricity.

Now then, I should like to take exception only for the purpose of comment, not debate. One of Mr. Nicholson's generalizations was that the cost of the project, the cost of wholesale current and all of the other cost factors are very constant throughout the United States. I will say that in many cases our estimate as to cost has been very constant but to assume that generally the costs will always be the same, I think is erroneous. We can regulate costs to some extent if necessary. We can have labor costs contributed, and we can have the poles contributed. We are actually making certain experiments in getting low-cost construction from contributed labor and material. We do not have to assume, and should not assume, that all of these other things are constant and only the farmer's income is variable. As a matter of fact I am far from being content with the assumptions that have been made with regard to the farmer's cash income and its influence upon his ability to purchase electricity. Sufficient reasons have not been shown that electricity should in some cases be regarded in the cost of production, and that electricity will replace expenditures now being made for gasoline, kerosene or labor or ice or other things which can be obviated if the farmer has electricity. Nor has sufficient reason been shown that so much of the farmer's income is intangible--such as the products of his garden--and that many of his activities will replace the cost of recreation, etc. So I am far from being sure that the standards are proper. What I want to do is to take these criticisms as criticisms of the way we are building up our projects. I am not willing to accept the opinion that we should, on the basis of general averages, condemn the greater part of the United States as outside the class of our ten percent.

MR. NICHOLSON: I am merely trying to be helpful as General Counsel of this agency in pointing out the type of evidence which I think ought to be in our records. Whatever may be the impression that my remarks have given, I know from my own inner attitude--and I trust you will take my word for it--my procedure is anything but cautious. I have approved practically all of the projects that have gone over my desk. I have disapproved a few and made a sort of guinea pig out of this and that one, but on the same day I have initialed projects that were very much like one that I refused to initial. I have acted in this manner chiefly to help in the development of our projects and to raise questions that should be raised as to the character of evidence on which we act. I am far from being critical of any part of this organization. I feel pretty comfortable in regard to the functions of every part of it. The point that I want to make clear, which I did not do sufficiently, is this--that in many of our records to date about the only evidence that we have been getting as to the farmer's ability to pay is in these general averages. I agree

with Mr. Fisher that they are probably not accurate and that the twenty-five percent saturation of automobiles, which is the only figure appearing in our records of some projects, probably ought to be clarified by a specific survey of our project. If it is shown, for instance, that there is a seventy-five percent saturation of automobiles, and the county average shows only twenty-five percent that immediately begins to reflect upon all of the averages. It is my idea that we ought to get into our records, as the most important part of our evidential material, reliable evidence as to the real purchasing power of our particular consumers.

MR. FISHER: I think at this time we should call upon Miss Liter of our staff, who has been making an actual detailed study of our customers in an area which has been condemned on the average basis. We turned down Kentucky 21 on the scale that its average figures as presented by available statistics from the Resettlement Administration and the Census showed it was not feasible; but an analysis of the actual customers signed up seemed somewhat to alter that picture.

MISS LITER: Kentucky 21 is comprised of four adjoining counties. The project sponsors are the county agents in those areas. I have no disagreement with the average figures as far as the average county figures are concerned. There are poor areas in certain parts of each of the counties, which are known in Kentucky as the "knob sections". There were other sections in the counties that are considered to be better farm land areas of the blue grass --the river and creek bottom types. The sponsors had selected areas for the project in these particular sections of the county. That, of course, was pretty much the background which we had to work with when we went into the county. I make the survey on the basis of a random number of samples. I take a given number of persons in the county from the customer's survey blanks and from these I visit as nearly twenty percent of the prospective customers as I can get around to see. This particular survey covered three hundred miles of prospective lines. After making the selection of families, I then proceeded to schedule plans for visiting the homes. If it is found that number seventy-seven happens not to be at home, in order to save time, the adjoining farmer, if that farmer has signed the customer's survey form, is interviewed. That was the method of family sampling on the project Kentucky-21-Nelson. I did not let the county agent suggest to me which farmer I should call on.

In general, I do not know the farmers I call on, so when I go into an area I try to keep the survey as objective as possible. In all instances when calls on a family are made, an

inventory is taken of their cash income. I start out with the number in the family and go through the necessary questions. There are some fifteen or sixteen of these topics. If it is desired, they can be distributed to those present who are interested, for the purpose of giving a background of the type of information I get in making a survey.

I found in that particular section of Kentucky, most of the cash income was from tobacco and dairy products. Tobacco prices were high. Here was a price figure that I had to consider, as it was typical for one year only due to the general tobacco crop failure over the country. The four county agents decided that a fair price figure to use would be thirty cents per pound on the tobacco. I take all of the facts and figures on the income from the farm into consideration, in order to determine the individual family budgetary needs. I ask the homemaker if she considers she spends one-fourth of the income for groceries and other family needs during the year. I go into detail as to the real income of the family. A check is made as to the year and make of the automobile, whether or not they have radios, telephones, etc. In certain areas in this project they did not have telephones, but in most homes we found that they had radios. Telephone lines had not been extended into a part of the area. The colored tenant group had not been included in the survey forms, a factor which would influence the average income of the project as a whole, because in the general average county income the tenants are considered as a part of that average farm income. We found that the average income of the project area, so far as the farm income is concerned, was approximately $1,800. That, of course, appeared to be a rather high income, so I went back to the county and checked with the Tax Commissioner, the assessor and the banker. I checked with the Resettlement Administration and got the report on the number of farmers in the project area that had received either a standard grant or drought grant of money. In this particular area I found that in one county there were thirteen standard resettlement cases, and that of the thirteen, one was located in the project area; in another county two cases were in the area. Checking these supplementary factors and checking the basis upon which we consider a family having an adequate budget including cash to pay for electricity, I arrive at the conclusion as to whether the farm cash income is adequate to meet the family needs.

After considering the amount for food and clothing and the items for household and farm operations, a check is made with the farmers, and in those instances where we have the farmer and the homemaker together, I talk with them of the family needs and determine the accuracy of that family budget on the actual need of the individual family.

I have just had handed to me a report of the incomes from these 5,000 farms in the area.

"On 12/8/36 the Kentucky-21-Nelson project was returned to the Development Division for a field check, because, according to Census statistics, the average income for 5,000 farms, in and out of the project area, was only about 10 times the necessary payout per customer ($60 and $600).

"The requested survey of 65 families selected on a chance basis showed an average family income of $1,945, instead of $600. A comparison of the field check and Census percentages shows: -- (for project area)

	"Field Check	Census - 1930 Figures		
		Bullitt Co.	Spencer Co.	Washington Co.
Independent electric plants	29%	2.8%	2.7%	2.1%
Automobiles	85	43.6	51.1	50.0
Telephones	74	35.5	28.6	33.0
Tenancy	11	37	45	36 "

May I say that while our report, so far as total average income and average farm income, may vary, that is because in certain areas we have classifications on "non-farm incomes". In these instances the farmer may have a supplementary income. We do classify as a non-farm income school teachers and mail carriers. Then I state whether or not that income is a supplement to the farm or a supplement to industry. If the workers are working in distilleries, as in certain selected areas, then I record that as not being supplementary to the farm, but to the industry in that particular area. I consider the filling stations and little country stores as supplementary to the farm income in the project area.

MR. CARMODY: In this particular State, have conclusions been reached, or are we still in the process of studying that allotment?

MR. FISHER: We are recommending it again and I am not certain whether it has actually gone up for allotment.

MR. GILSON: Yes, that has gone up, Mr. Fisher. It has been approved by Mr. Nicholson and is now on Mr. Herring's desk awaiting his approval.

THE CHAIRMAN: There are a good many papers on our desks awaiting decisions.

MR. HERRING: I have not looked at it.

THE CHAIRMAN: It was turned down absolutely because somebody said that they could not afford electricity. Now it is recommended on the basis of somebody saying that they can afford electricity.

MR. ADAMS: I should like to know what rating she found on this project.

MISS LITER: I do not remember just what that figure was. It was turned back to the people who had been handling it. Those averages may seem high in comparison to some of the surveys that I have made.

MR. ADAMS: It is in the upper half?

THE CHAIRMAN: Well, all the other factors being equal, this project ought to pass.

MR. ADAMS: I should like to see the figures.

MR. FREEMAN: This was rated in the second quarter of the State and in the third quarter of the United States.

MR. ADAMS: The rating third quarter of the United States means that, in speaking of project areas, the counties throughout the entire country are listed from top to bottom according to certain criteria such as agricultural incomes; then you take the first twenty-five percent of the counties and rate them in the first quarter and so on.

THE CHAIRMAN: What is that based on, income?

MR. ADAMS: Based first on income, with other factors being given consideration.

MR. HERRING: Did you use more than one thing to judge them?

MR. ADAMS: In effect, any rating you get is by a process of measurement. Obviously, our measurements cannot be as fine as those used by automobile manufacturers in gauging the size of pistons, but, by combining the good judgment of three or four people working on the project, you get this rating.

THE CHAIRMAN: If there is any one thing that has been inquired into more than another in the past fifteen years, it is income. People complain about income tax because it makes them put on paper what they get, but there are door-ringers and door-ringers

all over the United States inquiring of people what their income is. It is being done by agencies of all sorts--newspapers have their people out--advertising agencies have their men taking it --so that there are, apart from these figures over in Agriculture, hundreds of other sets of statistics covering practically every area in the United States. From my experience in the publishing business, I know that there are literally tons and tons of them having to do with incomes of individuals, and no one is too poor or has too small an income to escape inquiry.

MR. ADAMS: But how much are they worth a ton?

THE CHAIRMAN: I suppose that a very large percentage of the money spent to promote business and to promote advertising is based on those figures, whatever they are worth. But somebody thinks they are worth something. One thing should be said. It is very noticeable that the projects that have been submitted during the past six months have certainly been of a better grade.

MR. LONG: What I have to say is very brief, and I do not wish to take up much time. I think experience is one of the best teachers we have, and by comparison I have found out from the Pacific Northwest in California that the Puget Sound Power and Light and other Pacific electric companies have that entire western territory served upward to seventy-five or eighty percent. I should like to know what the straight line statistical reports of the counties out there are as compared with the territories in Alabama or Iowa which are now unserved. In Lee County, Alabama, they received an allotment from REA that had to be rescinded, because the power company not only built the lines into the county covering the entire project as submitted to REA, but twenty miles more. I should like to know what the statistical reports of that county were, as the power company evidently considered it economically sound.

THE CHAIRMAN: I should like to say this before you go on. Nobody is on trial here. Mr. Adams does not say, nor does the application say, whether an allotment has to be made in an area. I think, if you should ask him or any of his associates, they would say they wanted to see more data. I think they would; I do not think they have ever said that they had enough data. The Administrator is required under the statute, as has been said numerous times, to assure the Congress that projects are self-liquidating. In order that he may not make a mistake nor be required to review all the detail, he has asked several people to put their initials on the project before it comes to him. It must be recommended by the Development Division, that is, by Mr. Boyd Fisher; after his recommendation it goes to Mr. Herring and Mr. Nicholson and they

initial or do not initial it. Now they are the people against whom much of the talk must be directed because in my judgement, if they turn down a project that ought to be built they are doing more damage than if they build some project that should not be built. They have the heavy responsibility.

We are in the process of studying it. The Administrator has asked Mr. Coil to study our whole procedure. What he will find or recommend I have not the faintest notion. I should like to see the same kind of study made of every county area that was made in the northwest and on the Pacific coast to see whether we would have built the lines on the basis of these figures that are used by these men.

MR. LONG: That is the point.

THE CHAIRMAN: If the development men have in advance all of the factual data that we can furnish, these men themselves can check those figures and if they are wrong, then they can contradict them. I am suspicious of the 1930 census figures. We must use a new kind of judgment and intelligence and I think we are using them. Our problem is the furnishing of electricity to farmers who were denied it and told they would never have it and that is what we must do.

MR. LONG: This is no criticism, but purely a suggestion--let us make a comparative study of areas that are served as a basis for further judgment in a territory not now served. Another question that I should like to ask--if I understand it, Mr. Swanson in his statement said something about engineers who wish to integrate projects into larger projects. Mr. Nicholson advised that very thing in Washington. The correct answer as to whether to have these projects developed into a large integrated system or small integrated systems, Mr. Nicholson's view, and what he has requested . . . . . in Spokane, Washington, does not coincide with what Mr. Swanson has stated this morning, and I should like to know for my own personal satisfaction what I shall say to the people as to the size of the project.

MR. SWANSON: I could not answer that specific question because I do not know the facts in the two cases.

THE CHAIRMAN: You will not wonder now that I come up staggering frequently from these changes.

MR. HERRING: I am sorry that I did not hear Mr. Nicholson's and Mr. Swanson's talks, but there were two or three things said

before that I want to comment on in connection with these previous talks. Suppose I present them. There has been a good deal of discussion as to the customers' signed agreement and the way we work out these projects. When they come up they have a certain number of signed agreements from prospective customers indicating the appliances that will be used. From these the estimated usage is determined and the estimated revenue is obtained. We are assuming a good many things; that is the only thing development can do. I do not believe the development people really know how they arrive at the assumption that is made as to kilowatt hour consumption.

Mr. Fisher's men spend three days on a project. They set it up and get it working. It seems to me that if I were going to build any kind of a project, I should want to know for my own personal knowledge something of that particular area and decide, in my own mind, what the usage may run--so many kilowatt hours per month or per year--as a yardstick in order to arrive at what we ultimately want and that is revenue on the project. In some areas you field men probably talked with people who know more or less about the usage of various equipment, but you probably are guided largely by the financial ability of the people who pay.

So much for that. I am not criticizing that course in connection with the development people, but there are two alternatives in securing these agreements: Guessing at usage, and guessing at what they are going to buy is bad business. Look at the TVA. They have a thorough and entirely different practice. They go to the people and say they will have so much usage per month per mile of line before they are willing to deal with them. They get together and work it out. Then TVA says--Now, we believe that you are all honest people, but to be sure about it and before we start any construction work, we are going to have each one of you agree to do certain things. One, sign your contract with a wiring contractor to take care of your house wiring. Two, you, John Jones, said you were going to use a refrigerator, a radio and a washing machine; all right, but you must show us a signed contract with an appliance company to the effect that you are going to buy these appliances.

Now, until TVA has these two things, they will not start any construction. You can see their position. TVA requires that customers sign these contracts with appliance people or wiring contractors, and then there is not so much of a question about their going on the line.

I know about farmers' contracts to go on the line. I have handled hundreds of these agreements--thousands of them--and know that under certain stress and under certain conditions

they will sign to go on the line, but they do not specify when they will do so. They come back with an alibi that they did not specify when they were going on the line. It should be written into the contract that when energy is available and as soon as the line is completed, they will come on the line. It is impossible to get 100 percent of the people signed up to take service. Experience seems to indicate that, if in the first two years seventy to seventy-five percent of the people who agreed to come on the line do become users, you are doing a pretty fair job. We have some cases where we have done better than that, where there are more people on the line than agreed to come on, but they are exceptions. When I make that statement, it is a general statement. If we should approach our problem in that way and have these signed contracts, that is, let us say, after the allotment is made, it might tend to delay the time when construction could begin--I do not know how long--depending somewhat upon the size of the project and the people handling it.

Now, another plan that might be worked out to avoid these signed documents, that may or may not mean something, would be to get a signed contract--and I qualify that by saying that it may or may not mean anything--from each individual customer based upon what he is willing to pay and what he will guarantee to pay per month if the line comes by his property. In other words, we could work it something like this. Here is a project costing $300,000 and we want a certain amount of revenue from it--say, sixteen percent gross revenue. That would be $48,000 a year in order to have it self-liquidating, and with 900 customers, each customer would pay $53 per year. I want to tell you that when you get 900 people in any area to assure an average of that amount in dollars per year you are doing a good job. The next step would be to tell the sponsors that $48,000 annual revenue would be required. If contracts from the customers, guaranteeing to pay that amount of money, can be secured, the loan would be made. In that way again we are more or less sure of the gross revenue required. That, generally, is the practice of utilities throughout the United States--a guaranteed monthly minimum. So much for that.

There are two reasons why a man would want electric service. He may actually want electricity more than he wants anything else to use on the farm, but he may not be farsighted enough to see that with an electric line by his property he immediately increases the value of the property. The amount of the increase would naturally depend somewhat upon the location. A figure that is more or less general and I think it is used by a number of insurance companies, is $10 per acre. I cannot see such an increase in some areas like Nebraska where the farms are

large, but I can readily see it where farms are small and where the customer density is high. The value of the property is certainly increased, but how much is almost anybody's guess. This feature, I think, should be kept in mind, as it is a good talking point in connection with lines.

MR. WINDER: Relative to the possibility of reduction in cost of lines, we are building now under contracts in different parts of the country, single-phase primary lines for $600 a mile, or under, if you add three transformers, meters, etc., you increase the cost about $300. That varies as do primary line cost figures. When we started two years ago, the average cost of line construction over the United States, as shown on the books of the larger utility companies, ran from $1,400 to $2,000 per mile. We told them it could be done for $1,000. It was disputed and we were told that it could not be done. We have been doing it, even under $1,000, and costs have shown a tendency downward. Now, however, with the increase in the cost of material, there is a tendency upward. In a great many of our projects the amount of three-phase lines, in proportion to single-phase lines, may increase. As I remember, now twenty to thirty percent of the total is three-phase line. In some projects the size of the conductors is very heavy due to the necessity of getting the proper amount of current used through to the end of the line so in considering projects and the cost of them you must consider the amount of the three-phase lines in the project.

There has also been some question about the size of projects; when you go beyond the practical size, your operating costs are going to mount. If you keep at the average size, your operating costs will not show much variation. I am speaking generally as to operating costs. If you put two or three projects together, you can get by with one general manager and you can get by with one bookkeeper. I want to talk about that a little later on, probably tomorrow and go into it a little more thoroughly. I brought it up at this point, because it was commented on.

THE CHAIRMAN: I am just going to take a minute here to say something that may have a bearing on public relations. I hesitate to say it, because I do not want to discourage anybody, but so far as I know, and I am just learning this public utility business, it is practically the only business I know of that makes thousands of people sign on the line before they will invest any money. All over the United States are people who invest their money in the hope that they will get it back, with the hope that the products they make will be attractive enough to be bought at a price that will yield a profit. Here we are asking thousands of people who have every reason to be skeptical, for

their signatures, and asking them to say definitely that they will do certain things. Now I grant you we have to know something about possibilities. I do not know whether we have the same relationship to all of our projects that TVA has, but TVA has really brought the people up on a new level of consumption. In our organization more than in any Government agency that I know of, our department heads must be like the fellows on a baseball team who work for a double play all the time.

Mr. Herring has given us an idea that none of us thought of. I think it is an excellent one. In general, he says that having electricity on the farm or passing the farm, increases the value of that land perhaps $10 an acre--why that alone will almost pay for the electricity in a good many areas, because even if they do not sell the property, they can borrow on it. That is something to think about. Mr. Herring and I spent a couple of days in TVA on one of their projects. We found that since the project started, several cottages and small homes have been built on some tracts of land not in the suburbs of a nearby city or town, but several miles out--eight, ten or twelve miles out. The thing that happened is this: First of all, people who were living in town and wanted to live out in the country and have city life and country life, found that they could have both by moving about ten miles out. They found a small place, three or four acres, which they bought, and they built a new home. The reason they went out was because they had electricity there. They would not have gone if they could not have electricity. A farmer who owns forty or fifty acres could very well spare two, three or four acres, perhaps, for this same purpose. He may even sell half of his tract to townspeople that want to move out, thus increasing the number of consumers over the whole project and making everybody better off. Nobody could have foreseen that--TVA did not foresee it. They talk about it now with great pride, but it is characteristic of what is happening and what may happen in any part of the country. There are so many factors to be taken into consideration. The land increase idea is a real contribution, Mr. Herring, to this meeting.

MR. RAMSAY: One of the principal reasons I did not talk at that point was that I wanted to hear Mr. Carmody make that statement. I did not think I could phrase it as he could or answer it as he has. I should like to endorse him. That has been the attitude of the companies in the past and I think very largely in the present, in regard to taking risks. In my reading of the history of power companies, the taking of risks has always been minimized. As Mr. Herring and the engineers can tell you better, where there are big water power developments for example, the promoters or bankers often, if not always, wanted contracts signed before

they would pay out any money at all. It seems to me that in the merchandizing of electricity at retail, certainly in the rural electric field, you have always had this same sort of practice. The companies wanted their money, or an assurance of it, beforehand. The farmer had to pay for the line to serve him or he had to make a contribution toward it. He would have to agree to pay something--perhaps a very excessive minimum charge--or make some other promise. I do think that accordingly --and this, of course, does have public relations importance-- there has been a disposition in this field to treat the business as a sure thing.

It was not described that way to the public; the risks, of course, were given some emphasis, but actually they were as few as possible. In the rural field, they said to the farmer in effect, "Try and get it. You have either got to show us that we cannot lose on it, or you have got to make it impossible for us to lose. You have got to make a good case if you want that service." With that attitude, even though you make due allowance for some economic reasons for it, the movement will slow down. I am not passing on loans and certainly not defending undue risks, but I think there is a crying need for the new standards that some of you have talked about, and we shall probably have to evolve our own. From my own observation, I have not seen any complete answer to this question, although I have been watching from the sidelines. I think we have got to make the utmost use of the data and experience we have. But we must also get some new standards, as Mr. Carmody has indicated.

ADJOURNMENT 1:00 P.M.

Washington, D. C.

February 3, 1937

The third session of the Administrative General Staff Conference of the Rural Electrification Administration was called to order 9 a. m. Wednesday, February 3, 1937, by the Honorable John M. Carmody, Deputy Administrator, Chairman.

THE CHAIRMAN: Yesterday we devoted the whole session to development. I believe if we stayed here for three months, we could continue to discuss it, because there are a great many phases of it.

We must get on with the program. I am going to ask Mr. Freeman if he will talk to us this morning on the subject of "Can Loan Contracts and Construction Contracts be Executed by July 1 to Obligate the Funds Available?" In other words, let us find out where our program stands, and what we need to do to accomplish the full program. If we cannot accomplish the full program, how much of it can we accomplish, and by what means and methods?

MR. FREEMAN: I am not going to speak directly on this question. I am going to leave it to Mr. Nicholson and Mr. Herring to say whether we can or not. All I am going to try to do is show you where we are, and show you what I think will have to be done in order to accomplish the program. This chart, which I have had prepared, shows where we stand at the present time. I am afraid it is too small for you to see just what the figures are. This scale is the scale of dollars (indicating chart). Each one of these represents 5, 10, 15, 20, and so on up to the $65,000,000 which we are supposed to spend by the first of July or have under contract by the first of July.

This dotted line below, $58,000,000 is the figure which in the judgment of Mr. Fisher, Mr. Adams and some of the rest of you is the figure that we have set, which we think we can spend. That is because in some certain States we know that we are not going to be able to get rid of the amount of money which is allocated to those States.

This curve here (indicating chart) represents the total projects which are under examination at the present time. Those are the projects which have been developed by the Development Division, and, as you see, they are just a little bit over the $63,000,000 margin.

THE CHAIRMAN: Mr. Freeman, will you tell the people where this chart starts and where it dips at that point? They cannot see it as well as I can.

MR. FREEMAN: I did not finish telling about the chart. This scale down here (indicating) is a time scale in weeks, starting with last September, when we got our first allotments.

This line here (indicating chart) represents the total projects which have been presented by the Development Division and which have reached a figure of approximately $63,000,000, a little bit over $63,000,000. Our allotments as of February 1 have reached a figure of some $44,000,000.

COLONEL BABCOCK: What is that date, Mr. Freeman?

MR. FREEMAN: This date is as of January 29. This chart is approximately up to date.

Our executed contracts have reached a figure of approximately $26,000,000. Our construction released has reached a figure of some twelve or thirteen million dollars and the amount advanced has reached a figure of a little less than $5,000,000.

MR. FISHER: How much of that is out of this year's funds?

MR. FREEMAN: I am not sure. I asked that question sometime last week, and I was told that the figure was approximately $4,250,000, $25,000 of it was advanced from this year's funds and the rest came out of old funds. Mr. Gilbert or Mr. Cockrill can correct me on that.

MR. LAMBERTON: About $35,000.

MR. FREEMAN: About $35,000.

THE CHAIRMAN: Out of how much that is available this year?

MR. FREEMAN: Out of $43,000,000, if we completed our program.

THE CHAIRMAN: $35,000 out of $43,000,000?

MR. FREEMAN: $35,000 out of $43,000,000.

MR. HERRING: That is cash funds?

MR. FREEMAN: That is cash funds.

THE CHAIRMAN: To whom?

MR. FREEMAN: Advances for construction.

THE CHAIRMAN: When did we start?

MR. FREEMAN: July, 1936.

THE CHAIRMAN: Last year?

MR. FREEMAN: Yes, last July we started making allotments out of this year's funds as soon as money was available after July 1.

THE CHAIRMAN: You mean, it takes seven months from the time that the allotment is made until the money is advanced to the borrower?

MR. FREEMAN: That is right. I am sorry that this chart is not larger. Those of you who are familiar with my progress reports - -

COLONEL BABCOCK: Can they go up here?

MR. FREEMAN: Yes, sir.

THE CHAIRMAN: Perhaps you should have a spotlight on it.

MR. FREEMAN: This chart represents the steps which have been taken in performing the various phases. This is from examination to allotment, and the next step is from allotment to loan contract submitted by us. The next steps are loan contract executed by the borrower, loan contract executed to release of bids, release of bids to bid approval, and bid approval to construction contract approval.

This, of course, over here (indicating chart) represents the construction.

COLONEL BABCOCK: Are those all of the projects received for examination arranged in chronological order?

MR. FREEMAN: These are all the contracts in chronological order, 300. The average time that is taken from here until getting the projects into construction, is around forty-two weeks.

COLONEL BABCOCK: Do those narrow vertical spacings represent five weeks' time?

THE CHAIRMAN: I have never seen this. I do not know what it is intended to represent or intended to convey to us. I suspect that if we are going to go from the top chart, with which we are familiar, to this, there should be a little clearer explanation of what this is. It is going to be difficult enough for the people who cannot see these lines to understand it, but if they do not know what these lines represent and what projects are included, it will be still more difficult. When you say 300, I do not know whether that means projects which have not yet got to the Legal Division, or whether they are projects which have got to that stage and will go from there on to construction.

MR. FREEMAN: In this column here (indicating on chart) are projects which have been sent to examination. These are projects which have gone to the Legal Division and have had engineering examination, either in the Engineering Division or in the Development Division, and then next have gone to Research and Statistics.

THE CHAIRMAN: Have they been allotted?

MR. FREEMAN: The black lines are those completed. That is, they have gone to allotment. The red lines are uncompleted as yet.

THE CHAIRMAN: Then you have in this line all the projects which have gone to allotment?

MR. FREEMAN: All the projects which are under examination and have gone through examination.

MR. O'CALLAGHAN: Mr. Freeman, would it not clear up this thing if you said $44,000,000 had gone to allotment and projects amounting to $66,000,000 are under consideration, leaving a difference of $22,000,000, which has not been allotted or submitted?

MR. FREEMAN: That is right. That is shown here. In other words we have around $44,000,000 which received allotment.

MR. O'CALLAGHAN: That is right.

MR. FREEMAN: What we have to do in order to complete our program, in order to complete this $58,000,000 -- I might say that that figure is subject to revision because it should be moved up -- will be pointed out. Certain States in which we thought that it was going to be impossible to get projects, are sending in projects. For instance, we thought that because of the very low economic rating which was given to Louisiana, that we would be unable to develop anything in Louisiana. As Mr. Falkenwald has told you, he did develop projects in Louisiana to the amount of something like $1,250,000, and yesterday all those projects went to allotment.

THE CHAIRMAN: Give the proviso.

MR. FREEMAN: Provided, after an economic study by Miss Liter, those projects are shown to be sound.

The same thing is true in Arkansas where it seemed almost impossible, because of the very low economic rating which was given to Arkansas, that any projects would be developed. I have not seen the projects, but I understand that Mr. Pyles has developed projects out in Arkansas which may go through.

In order to meet our program, using this chart, Colonel Babcock and I tried to reach what we thought, upon the examination of these projects, could be considered as the normal time to put projects through. We felt that five weeks for examination was ample time in the examination. We felt that a matter of seven or eight weeks here for the preparation and submission of the loan contract was a reasonable time to allow.

MR. HERRING: What was that?

MR. FREEMAN: Seven or eight weeks. I cannot tell exactly what those here regard as a reasonable time to allow. We felt that three weeks was ample time to get the contract back from the borrower and to have it executed by the Administrator. We felt that a matter of seven weeks was sufficient to have release of bids and get the bids in; a matter of five weeks -- I guess it is four weeks -- for the approval of bids, or, rather, I guess three weeks for the approval of the bids, and that two weeks was ample time for getting out the construction contract and getting the construction contract signed. That makes a total of approximately twenty-five weeks.

THE CHAIRMAN: What was the last period for getting the contract approved?

MR. FREEMAN: Two weeks, with approximately twenty-five or twenty-six weeks, was ample time for getting a project into construction from the time that the project came in until the construction contract was released.

Working on that basis, I worked out this program which must be accomplished. I should just like to explain one thing further.

You see, in most cases there are two lines reaching from each one of these. This lower line shows where we will hit on July 1, if we go on at the same rate at which we are going. The upper line is what must be done if we are to accomplish our program, that is, get the construction and get the $58,000,000 released by July 1.

MR. NICHOLSON: Why do you say that has to be done?

MR. FREEMAN: I say, if we are to get construction released as of July 1.

MR. NICHOLSON: That does not have to be done. The contracts have to be executed but the construction contracts do not.

MR. FREEMAN: If you do not want to carry your program over into the next year from this year, why, you want to have your construction contracts signed by the first of July, do you not?

MR. NICHOLSON: That is true, but I was referring to what we have to do.

MR. FREEMAN: What I was considering in this thing, and as I understand it, there will be certain loan contracts and construction contracts signed, and if we want to meet our program, so that we do not have to carry over into next year beyond July of this year, of course it means that we shall have to get construction contracts signed for that amount of money.

Then, in order to meet that program, that means that to get the $58,000,000 used up, we will have to make allotments in the next two weeks of approximately $6,500,000. Now, whether that can be done or not, I do not know.

MR. FISHER: Is that what has been recommended?

MR. FREEMAN: That much has not been recommended as yet by the Development Division. Yesterday they put through, as I said, about $1,250,000. There is probably $2,000,000 more on my desk.

MR. FISHER: We can get it, I am sure.

MR. FREEMAN: Yes, I am satisfied that so far as the Development Division is concerned, and so far as allotments are concerned, that the meeting of this program at this point is possible, provided we can get the allotments through.

Now, when we come to executed contracts, it means, if you will figure back from this, that there are about twenty weeks in here which we have allowed for getting the contract executed. That means, then, that by the first of April we shall have to have executed contracts to meet this amount. That means that we shall have to execute contracts at the rate of about $3,000,000 a week to get executed contracts of $58,000,000 at this point (indicating on chart). We shall have to release construction at the rate of about $2,000,000 a week in order to have construction released to get out the total $58,000,000 as of July 1 of this year.

Now, what we can do, as far as advancing money is concerned, I do not know. As you can see here, if we continue at the rate at which we have been going for the past three or four months, what we shall have in released money as of July 1, will be somewhere around seven and one-half to eight million dollars. What we shall have in construction contracts released will be approximately $20,000,000. What we shall have in executed contracts will be about $38,000,000. Whether we can raise this or at what point we shall hit, I cannot say. All I can indicate is what has to be done, and if we go on at our present rate, where we shall come out.

THE CHAIRMAN: The Administrator is not sitting back there, is he? He told me last night that he was coming here this morning at the opening of the session. I was going to ask him what our objective is. I had not thought to ask him. Maybe somebody knows what our objective is at the end of this year.

MR. FREEMAN: I suppose our objective is to get rid of this $65,000,000.

THE CHAIRMAN: Mr. Nicholson said we did not have to do it. What is our objective? Does anybody know?

MR. NICHOLSON: I said we did not have to sign the construction contracts this year. Neither do we have to advance all the money or assure completion this year. If the Government makes the commitment this year, we can disburse the money next year. We have $50,000,000 which we can commit.

THE CHAIRMAN: Mr. Ramsay, you have been telling the public what we are doing and what we are going to do. What did you tell them? I have been too busy to read the papers, but a lot of people read them. People out in the country can tell us our objectives better than we know them ourselves, maybe, because of the way in which you fellows inform them. What do you tell them?

MR. RAMSAY: I do not want to imply that we have stated the answer precisely to the question which is being brought up here, because perhaps we have not. But the clear import of everything that has ever been written, I think, since REA was created, and everything that Mr. Cooke has said and written, has been that we wanted all the electric service which we could get in the shortest possible time, and that the only limit on it would be the amount of money which was made available for the purpose, and our ability to use it, using it, of course, just as soundly and wisely as could be. In other words, the implication, I think, of every statement of policy which has ever gone out is that we will take advantage to the full of all the money that Congress has made available to us, and that we can and will use it and will not make anybody wait whose need is within the resources of the organization. Can I elaborate on that, or does that cover the point.

THE CHAIRMAN: It is a nice general statement. I was looking for some figures. If our objective is to get rid of this money, then we have reached a certain stage in that objective, at a certain time, and we should figure out how fast we have to go, as Mr. Freeman apparently has done, from now on to the end of the period. But if that is impossible or if it is impractical, then we have got to modify it to a pace which we can maintain during that period and do it with the organization that can be set up under the budget. That seems to be a definite job.

We are discussing, Mr. Administrator, our objective this year. I asked if you were here a little while ago. I was afraid you had sat down in the back of the room and were fooling us a little bit.

We shall not ask this question of you now, because we want to go ahead with the discussion.

MR. COOKE: I promised to be here at nine o'clock, but I was obliged to dictate a few important letters first.

THE CHAIRMAN: I was a little late myself.

MR. COOKE: I shall be here for some time.

THE CHAIRMAN: What we are trying to do, Mr. Administrator, is to find out what our objective is for this year, until July 1. When we have determined that, we shall know at what rate we must go in the various divisions to achieve that objective. Spending our whole allowance, based on our present position, looks to me impractical -- I won't say impossible, but impractical.

Now, how seriously are we committed to the objective, and how much must we modify it, without convicting ourselves of having promised too much. What is reasonable to do, and what steps are in order to fulfill at least the general opinion that people had of our ability to equip and to serve them. That is really the problem as I see it.

This chart here shows total project allotments made, executed loan contracts, construction released and the amount advanced.

Now, there can be used the old money and the new money. We are at this stage about February 1. We have apparently got almost enough projects now at this stage, or we have got enough, to warrant our feeling that there will be no difficulty in getting projects, if they will stand up.

Allotments are at this stage, which must go almost on this straight dotted line. This makes it possible to disburse the money by July 1.

Executed contracts must not go on this line that represents a year's work (indicating chart) but on this line almost straight up.

Construction contracts released must go from this position (indicating) almost on its back, to almost a vertical position.

Amount advanced does not quite follow the construction release anticipated line or projected line.

So that is where we are. Of this amount advanced here, only $35,000 of it is from this year's money. The rest is from last year's money.

But the problem is, how can we do it, and we discuss it here, because the people who are in the field ought to know what they can promise. If they are over-promising they are putting us in a deeper hole all the time. If they under-promise and lose the projects, we ought to know it.

COLONEL BABCOCK: Was it determined that these were executed contracts by June 30, 1937 or construction releases? That will make a difference on that remaining.

THE CHAIRMAN: Mr. Freeman will have to explain that. I do not know the details of this chart.

COLONEL BABCOCK: That is set up for construction contracts, signed by June 30. If these are to be loan contracts executed by June 30, which Mr. Nicholson said is the objective, then it changes the graphic lines which are shown there.

THE CHAIRMAN: It depends on whether you want to spend the money this year or whether you want to say to people: "We are prepared to obtain it for contracts, and if you spend it in two years, it is satisfactory."

MR. FREEMAN: The whole point is whether we want to carry part of our program into next year, Colonel Babcock. In other words, if we do not execute these construction contracts by the first of July, it means carrying part of our program for this year into next year.

THE CHAIRMAN: That may be unavoidable.

MR. NICHOLSON: It is obvious that a good part of the program has to be carried over to next year. That is not an open question.

THE CHAIRMAN: Wait a minute. It is not obvious at all. If you are going to complete a program in ten years, the question is what do you call "complete"? Have you completed it when you have contracted to lend your money or when you have spent your money and got your construction crews off the job? If that were the case, some divisions might be through one year ahead of the construction crews. In other words, you do not carry your whole program through ten years or one year, for that matter. At least, I see that division.

On the other hand, if the objective is to obligate our money by the end of the year, July 1, of course it may be that these other divisions will work for eleven years and some for twelve years. I am speaking of the practice, assuming that there will be no change in it. I did not know whether the practice, as set up, meant that it would be finished in ten years and washed up, if nobody else continued it, or whether part of the organization would be through in ten years and part of it in eleven or twelve. Do you see the distinction?

MR. NICHOLSON: Some time in the ten-year period we shall reach what I call the plateau of our operation, in which the projects going out of construction just about balance the projects coming into construction. Even when that happens, of course, in the tenth year unless we allot the whole $40,000,000 in the first couple of months, completion of construction will have to carry over into the eleventh year. That has been true of most spending agencies, the RFC being perhaps the most conspicuous example. Facing our present situation, we have not reached that plateau yet, since the projects going out of construction are nowhere equal to the projects emerging into the active stage. So, even if we sign construction contracts for the whole $50,000,000, by the end of this year, a considerable portion of this year's program would have to be taken care of next year. The funds would have to be disbursed and many sections of our organization would have to be very active. Our Auditing Section comes into its greatest activity at the time that the funds are being disbursed.

Now, so far as utilizing the money which is available to us and not losing it, the only thing which is necessary is to sign loan agreements and to commit the Government prior to July 1. After that time we can do next year with this year's funds as we are doing this year with last year's funds. We have five months in which to commit the balance of the $50,000,000 for this year. That means about what in allotments? About $20,000,000 of additional allotments, does it not?

MR. FREEMAN: It means better than that.

THE CHAIRMAN: How much?

MR. FREEMAN: As of February 1 we had $44,000,000.

MR. NICHOLSON: There are about $30,000,000 of allotments already made this year, thus leaving $20,000,000 for additional allotments. We have already sent out about $21,000,000 of loan contracts under the 1936 Act, and $15,000,000 or a little less under the old Act. Assuming that the additional allotments are made, and assuming that we commit the entire $50,000,000 by the end of this year, it means about $29,000,000 of loan contracts must be executed by the Administrator between now and the first of July. That is at the rate of a little less than $6,000,000 a month. Last month we sent out thirty-three contracts totaling over $6,000,000. That represented a pace which we may not be able to keep up. I do not know. It represented more pressure upon the Legal Division than normally ought to exist in a healthy organization.

There are some unknown factors. It depends a good deal upon what happens at the borrower's end. We cannot control the situation completely. If we had perhaps twice the number of attorneys, so that we could send out an attorney to do all the work for the borrower -- we already do about three-quarters or two-thirds of the work -- if we had enough engineers to send our engineers to the borrowers to do all their engineering work, so that this program would in effect would be a Government program, I suppose we could do it in half the time that it actually takes. The fact is that we do not have an organization of that size, and we should not have. So that we just have to do the best we can with the set-up which we have.

I think it is possible, quite possible, to sign up by the end of this year the bulk of the money that we have available. That means that next year, when we begin a new year's program, we shall still have a very large carry-over of work from this year. This carry over will include: the signing of construction contracts; following through with the construction of projects; all the work which is necessary here in connection with the disbursing of funds; and all the work which we have to do in connection with the auditing of the borrowers' accounts.

It is my opinion that some time in the next fiscal year our program ought to reach this plateau about which I spoke, in which the projects going into construction just about equal the projects that are coming out of construction and have been completed. My guess would be that it will be reached about the latter part of next fiscal year.

MR. RAMSAY: May I answer further the question which you asked?

THE CHAIRMAN: Mr. Ramsay.

MR. RAMSAY: I confess my statement will be general, but you are all aware that almost all the statements in public relations tend a little towards the general side. There are reasons for it, some of them quite good reasons.

In the first place, what we have said about this program from the beginning to today, we did not talk about Mr. Freeman's charts, because charts are enough of a headache within the organization without asking the farmer to take them on. We have tried to put everything into English and, as far as we could, English which the farmer could understand.

It is, of course, true, as you implied a while ago, that there must be a relation between what we promise and what we do. And there must be a very close relation, I think, between what is put out by the Information Section and, of course, in another way, by the Development Division, as well, in the way of responses as to what we will do or hope to do, and our performance thereafter.

Broadly speaking, on the information side, and through our other branches, we have not told the farmer that we are going to give him allotments or loan contracts. We have told him we are going to give him electric service, and it is only in those terms that we can reach any sort of understanding with the farmer as to whether we make good. If he gets the electric service, we are in the clear on our promises, and if not, we are not in the clear. What will count before very long is how many lines we have got up and how much electricity the farmer is getting over those lines and using.

I might add, that while we do not deal with charts and usually do not come down to specific figures, because this is difficult to do and not always workable, the implication of the statements all through has been that we would give them the strict performance that is represented by those lines of Ward Freeman's, which go almost straight up.

THE CHAIRMAN: I must confess to some confusion, because I do not know the objective. I did not know whether there was a definite objective, or whether there was a general objective of giving electrification.

The Administrator knows from his long experience in competitive industry that I am likely to approach this analysis from the point of view of scheduling production in competitive fields. For instance, if this were a competitive automobile business, Mr. Administrator, say General Motors, and we were planning to have our cars on the showroom floor in November and in the dealers' stocks by the first of January, we would make our arrangements accordingly. How many cars can we sell? What models? When shall we deliver them to the dealer, and from that, back to the designer. Now, the designing department, in order to allow us to deliver cars on the dealers' floor on January 1 must have started their job much earlier. They must have all of their designs ready by -- let us say -- August. The tool and die makers must be through with all of their work by September 15, and so on with other preparatory departments. All the orders for steel must be placed by September 30, scheduled definitely at so many tons per month, per week and per day. All this must be done so that finished cars can be placed on the dealers' floor by January 1. It is not enough that the purchasing agent says on January 1: "I have ordered all the steel which you are going to need."

Maybe we are not running that kind of business. Maybe it is a wholly different business. Maybe our programs can lag one year or two years, that is, some parts of it, and if it can, we ought to consider it and I ought to stop worrying. Everybody else ought to stop worrying about getting the program finished in a certain time when we allow ourselves one and a half years extra and still retain the confidence of the public that is waiting for the service.

Here is another simile which comes to me:

If the pressing department in the steel plant gets stuck pressing bodies and the stuff piles up and another department is waiting and then they dump a whole load -- three weeks' production -- on the next department, they cannot digest it. That means that each of our divisions must know in advance about how fast and in what volume work will be released to it from the others.

Let us see what is represented and what these men can promise. Maybe they must stop promising for the rest of the year, and maybe they must say that only the contracts which are signed will get into production by the first of July. If that is the case, let us tell the right people so that they will not be bringing pressure to do the impossible.

Mr. Herring, you have had a lot of experience and you have seen this situation. What should we do about those straight lines? What is the reasonable, practical thing to do to level them off?

MR. HERRING: It seems to me, if we plan so that the executed loan agreements come in between now and the 30th of June, that all we need to proceed with are the construction contracts. It is the problem of the Government to furnish the money. The details of furnishing that money can be worked out after the first of July. So that as you flatten the green line, the second line, out to the first of July, you also flatten the other one.

THE CHAIRMAN: Yes, sir.

MR. HERRING: The period in between would be practically parallel, if it were flattened in that way. That gives a better opportunity, unquestionably, to get through the amount which we want. As I say, our objective for this year is to get signed contracts to a total of $50,000,000, subject to the restrictions in the bill.

THE CHAIRMAN: Yes, sir.

MR. HERRING: As you know, there is an allocation or disposition of the money.

THE CHAIRMAN: Yes, sir.

MR. HERRING: We probably cannot reach that entire $50,000,000, but it looks better now than it did four or five months ago. I mean, we can get closer to it. Perhaps it will be within four, five, six or seven million dollars, or some place along in there. That, as I say, was our objective this year. Our carry-over was about $15,000,000 from the 1935 Act, thus totaling something on the order of sixty-two or sixty-three million dollars. With loan agreements at the present time somewhere about $25,000,000, it should not be a particularly difficult job, from what I understand we have in the way of projects in the allotment stage, to go ahead and get the entire amount.

Now, let me go back a minute. Mr. Freeman's figures, as he had them set up, showed a total of twenty-eight weeks, which is seven months, from the time that the project is started until we get into construction. That to me is just entirely unreasonable.

THE CHAIRMAN: Where did you get that figure, Mr. Freeman? What is that figure? I had not heard of that figure.

MR. FREEMAN: I worked that out with Colonel Babcock, and Mr. Herring. Originally on the program charts we had one line at the bottom showing the time in which you thought the project could go through, which, as I remember, was approximately nine weeks. Obviously, that time was too short. But what Colonel Babcock and I did in setting this up and in trying to arrive at a conclusion was to see what we thought was a middle line.

THE CHAIRMAN: First of all, did you find out what has actually happened throughout the program?

MR. FREEMAN: Yes.

THE CHAIRMAN: What did it boil down to? How close does it get, on the average. What is the average time?

MR. FREEMAN: The average time is around forty-two weeks.

THE CHAIRMAN: That is the figure to which Mr. Herring is referring.

MR. HERRING: Let me ask this, in your first or second column did you take projects prior to October 1, which we started with and played along with for weeks and weeks?

MR. FREEMAN: Yes, sir.

MR. HERRING: That should be thrown out, that factor.

THE CHAIRMAN: That is right. Let us discard this from our consideration.

MR. HERRING: Absolutely.

THE CHAIRMAN: So that you arrived at twenty-seven weeks?

MR. FREEMAN: No, forty-two weeks is the average time.

THE CHAIRMAN: I am saying, having discarded that and having got beyond the experimental stage more or less and got down to a working basis, you arrived at twenty-seven weeks. Is that what I understand you arrived at?

MR. FREEMAN: We arrived at that figure by taking all these

projects into consideration. You see these black lines which are the completed projects? (referring to chart).

THE CHAIRMAN: Yes, sir.

MR. HERRING: That is as far as allotment is concerned?

MR. FREEMAN: That is as far as allotment is concerned. There are five of them which come within a period of less than five weeks.

THE CHAIRMAN: What do the red lines mean?

MR. FREEMAN: The red lines mean those projects which are not completed as yet. Even taking five weeks, it is not an average for all the black lines. If we took an average it would come out somewhere in here. (Indicating on chart.) So that we considered the time in which we thought it might be accomplished, a fair time.

THE CHAIRMAN: Is that clear?

MR. HERRING: That is clear, but I still disagree and say that it is too much time. When you talk about twenty-eight weeks, it is too much time. Five weeks for development, seven weeks in the next step and three weeks for a contract to be returned from the borrower, and seven weeks for publicity and release, and four weeks for approval of the bids.

Certainly we can take the heart out of those figures, but if we do it somebody must stay on the job and get it through.

I took two cases which we followed through very closely. We had close to the sixty-three days or nine-week period on them. We did get into a jam on one of them, for reasons entirely beyond our control, which I shall not take up. But we were ready to start construction in the time which we estimated. The other one could have been cleaned up had we not had this particular thing arise in the sixty-three day period.

I think in a lot of cases we can clean up projects in much less than the twenty-eight week period. If we are dragging along, something should be done to remedy the situation.

There is just one other comment which I want to make, and that is on the amount of money advanced -- the

cash paid out. To a certain extent, that is, the Washington Office, has no control over that money in regard to pushing it along. After the first advance, we can advance funds only on requisitions which show that the material is in place. We do not advance money for material delivered. If we did that, it would make a tremendous difference.

THE CHAIRMAN: Who advances that material?

MR. HERRING: The contractor.

THE CHAIRMAN: About how much financing is being done by contractors, do you suppose?

MR. HERRING: It is pretty hard to guess. The figure would be somewhere between five or six million dollars.

THE CHAIRMAN: Do many of them have difficulty in putting up the $500,000 bond?

MR. HERRING: The contractor and the manufacturer that is going to furnish the material to the contractor get together on a thirty or sixty-day payment. That means, of course, that the actual amount of money advanced is always going to lag behind, but if we get into more construction, of course those amounts will increase and I think the percentage of cash advanced will begin to pick up. It will begin to grow larger rather than remain about what it is now.

There are now approximately thirty or thirty-five percent of the contracts released, but I think that figure will unquestionably pick up as we get into construction. This follows, without any chance for criticism, I think, that when a contractor takes a job, he wants to get the job through just as quickly as he can. The quicker he completes it, the more money he makes out of it. If he is delayed for any reason, his overhead continues, or if he has spent a month or two more on the job than he should have, his profit is materially curtailed.

I think on all contracts, it would be better, if we can in our own minds definitely conclude that they are going to be pushed just as hard as possible. In other words, the contractors want their money just as fast as they can get it.

THE CHAIRMAN: I committed you to something yesterday. I said this: There are two kinds of delays, one the delay

resulting from the borrowers' inability to meet the demands immediately, easements or something, and then there are certain kinds of delays inside the house. I said that one kind of delay that we could eliminate immediately is this: If anybody, no matter who it is, gets a project or any phase of it to work on and is doubtful about what to do, he should not delay the matter but take it to his chief. Irrespective of how busy the Administrator is, I have never known the time when he would not stop to give an answer to a doubtful or controversial question. That may mean a lot of work, but that is one kind of delay which should be eliminated.

All of us at times get hold of something we do not know what to do with. It gets laid away; it gets buried and two weeks later we ask what to do about it -- it has been delayed! If anybody has anything that he does not know what to do with, he is causing an unnecessary delay. Is that committing you to too much?

MR. COOKE: I am glad to be committed. I have to depart soon, but I want to say this: That I think this has been one of the most inspiring meetings of Government employees which I have ever attended. I see the purpose of it and I think I see where we are getting. Somebody told me a story the other day about one of the boys in a C. C. C. Camp who asked the cook how to make hash and he said, "You don't make hash; you just accumulate it."

There are a lot of Departments in Washington which have been accumulated. In this organization we have made the effort right from the start never to make an addition to it that we did not have a logical reason for and, furthermore, right from the start we have tried to make the moves that led up to these charts and led up to this understanding of our problem.

Now, I thank God and I thank you for the fact that you are not bringing this stuff together as -- what do the psychologists call it? -- a defensive measure. You are not bringing it together in order to prove that you are pretty good and that what is wrong is beyond your control, but you are bringing it together so that the problem, in its various parts will stand out, so that each of us -- and of course I include myself in it -- can get our own lesson from it and buck up and decide that we are going to do better, and that what is removable in the way of delays and obstacles is going to be removed.

Now, I have very little patience myself with people that do not come along -- and I think I am looking at one of the men who said the other day, "I am 100 percent opposed to a certain thing," or I think he said, "I am against it in toto." You really cannot be against a thing "in toto". I feel the same about people who come along and say that our organization is -- I shall not use the term because there are ladies present -- but who feels that we are pretty punk. I do not think that we are pretty punk. I think we are pretty good. I am not saying that to sell ourselves to ourselves. I am simply trying to face facts.

As I look around this room and see different people, some of whom I know better than others -- unfortunately, because I should like to know all as intimately as I know some -- I do not see people who are running away from their jobs. I see people who are up to the limit of their ability trying to make a success of REA.

We have got to get the general staff idea into our organization. In the old days the Government departments just accumulated. There were bulkheads between the different sections and they acted independently. I have been reading something sent me by Secretary Root within the last couple of weeks, in which he told the story of how he took the army after the Spanish War and created the general staff. Before that the infantry went its own way; the cavalry went its own way; they had uniforms, horses and all that stuff, but Root brought them together and created a single organization out of them. I believe that we have in our little organization the beginnings of a general staff. We have right around my office the heads of the divisions. Fortunately we have Colonel Babcock and Mr. Freeman now specializing on this phase of our work, and I think that we are going to have to do a bit more general staff organizing. There is no use talking about it. If you are just going to generalize about it, but if you can put your finger right on a job and perhaps have one or two individuals in the organization who live with it, we shall be able to tone up the organization and get coordination.

I am wholly with you in trying to map out a program which we can follow and then do it.

THE CHAIRMAN: That is what we want.

MR. COOKE: It has been a little difficult and perhaps we have been a little slow in getting at it, but if we have

not got the talent here to do it, it cannot be done. I do not know whether you all realize it but we have more managing talent in an organization which numbers a little over four hundred than any industrial organization in the United States could not only afford to have but could have. There are more people in this organization today that know the best that is known and thought about organization. They would not dream as a group of going to work for anybody in the United States in a private concern, but they are willing to work for this organization. So we must put our heads together and come to deal with the matter more in the idea of a general staff -- not looking upon this as an attack upon anybody.

THE CHAIRMAN: No, it is not.

MR. COOKE: Not, on the other hand, looking at it as a defective mechanism, proving that you are asking us to do something which cannot be done. That is all. If any man in this organization sees me lying down on the promise which was just made, let me know.

THE CHAIRMAN: Thank you very much.

(Applause)

THE CHAIRMAN: Last night Mr. Cooke suggested that I ask this question this morning. How many people here have been on their feet with a question or suggestion? Raise your hands.

(Whereupon there was a counting of hands)

THE CHAIRMAN: About twelve. How many have not? Raise your hands.

(Whereupon there was a counting of hands)

THE CHAIRMAN: Some of these people must express themselves.

MR. O'CALLAGHAN: May I address a few remarks to you on this subject?

I am going to quote a few figures and show the status of our loan contract work, as we have it.

We have Relief Act allotments of a total of about $15,000,000 and have loan contracts executed on all but about $950,000 of these allotments.

There are about six or seven projects on which we have allotments under the Relief Act that are still to be worked on. Only two or three of those are really workable. There is Nebraska, Platte, which the PWA is holding up. There is one in Iowa which is dead, or about dead, so far as I can gather. We have in that category, that is Relief Act allotments, only three or four hundred thousand dollars worth of projects which are workable from the Legal Division's point of view.

We get into the REA Act of 1936, where we have had allocations aggregating about $29,300,000. On those allocations we have got out loan contracts for about $21,000,000, leaving a little bit over $8,000,000, $8,421,000, as I figure it, in which loan contracts are in process. A number of those projects are not workable from our point of view. Some of them are dead and some of them are dormant, or we have to wait for certain things from the borrower, but it is reasonable to assume that possibly about $6,000,000 of them are workable. Granting reasonable cooperation from the borrower we can get them out within the present calendar month, if we can keep going like we did last month. But when those are gone, we come to a stop. Now, it seems to me that it would be very advisable, knowing the delays which come in, that we get projects, as soon as we possibly can, in order to start work on them. For instance, we have trouble getting lawyers in the local communities to work on the projects and that consumes time. We have to form a corporation always, except where power districts or private corporations are the borrowers -- in other words, ninety-five percent of the time we have to form a corporation. Sometimes we have to start advertising as a prerequisite to the formation of a borrowing corporation, which takes thirty days. All these ingredients consume time.

It seems to me of the utmost importance that we get projects just as early as we can. Even if we are charged with holding the thing up an extra month it would make things work out better; if we can get them a month or so ahead, so much the better.

For instance, on the ones which we have, it is reasonable to assume that we shall be exhausted within possibly one month or six weeks.

That is the only contribution I have.

THE CHAIRMAN: Thank you, that is very good.

Of course, yesterday we spent the whole day in discussing how difficult it was to get a project through at all, that is, the things which have to be proved to make it feasible and justifiable, all of which takes a good deal of time.

It seems clear now, that there must be in development certain projects which show every evidence of being able to go through. It may be that through a conference between the Legal Division and the development people, the Legal Division will be aware of certain things which are pretty sure to come through, and about when they will come through even though all the details of development are not worked out. I think the engineers and lawyers do that to a considerable extent, at least I am so informed. I do not think that is done in the other divisions, but perhaps we can do it. Let us think about that and work on it in specific cases.

MR. WALTERS: Mr. Chairman, I fail to make Mr. O'Callaghan's figures jibe with the chart. I believe you show $9,000,000 now allotted and not under contract?

MR. O'CALLAGHAN: Yes, sir.

MR. WALTERS: The chart shows $20,000,000.

MR. NICHOLSON: The chart is based upon contracts executed by the Administrator, and Mr. O'Callaghan's figure is based on contracts completed by us.

MR. FREEMAN: There are somewhat over $6,000,000 of contracts that are out and not executed.

THE CHAIRMAN: You surely cannot quarrel with that.

MR. WALTERS: How did our total projects take such a sudden drop in December?

MR. FREEMAN: We had been carrying along here (indicating on chart) a group of projects and decided to clean house. In other words, they were projects which the borrowers decided to drop. The Development Division had a lot of projects which they felt were unsatisfactory, which were not coming through, and Mr. Fisher simply cleaned house and knocked out about six or seven million dollars worth of projects.

MR. WALTERS: Then we can assume that the projects left ought to be pretty good?

MR. FREEMAN: Yes, the projects left, the $63,000,000, are presumably all fairly good projects.

THE CHAIRMAN: As a matter of fact, disposing of this line of discussion, it may have made room for really good projects in certain places.

MR. PYLES: I do not know whether this question is in order, but if this discussion is dealing with the reasons for delay on getting the projects under contract, I believe it would be well put at this time. I had thought I was familiar with the required proceedings on a project after allotment but, from what I have found in the field, I apparently am not.

On my recent return trip to Washington I stopped at one of the projects which was allotted eight weeks ago; to see how the sponsors were proceeding. I found that the sample form of loan contract had not even been sent to the sponsor from Washington advising them what had to be done to get the contract under way.

THE CHAIRMAN: Name the contract.

MR. PYLES: Missouri-Texas-18. I called the attorney for the project. He stated that not only had the contract failed to materialize, but that he had received a letter from Mr. Clark of the Legal Division advising him not to proceed with the election of officers, by-laws, etc., or the obtaining of easements, design of plans and specifications, etc., until the sample loan contract had been sent from Washington, even though the cooperative had already obtained its charter and corporation papers. The attorney further stated that on none of the Missouri projects had he received the loan contracts sooner than three weeks after allotment.

Now, I should like to know why it takes so long to get these loan contracts in the sponsors' hands, and yet we hear complaints from the Legal Division that the attorneys for the projects are slow in performing their work.

THE CHAIRMAN: That should be taken up with the Legal Division.

MR. O'CALLAGHAN: The loan contract went out last week. It had been held up on the question of the sufficiency of the amount of the allocation and the accuracy of the mileage figures supplied to us. The organization of that corporation was not proper, and we refused to send the loan contract

out until we had our local attorney down there correct the organization of the corporation. That is typical of the criticisms that we get. They will criticize us for their own deficiencies, and there certainly were deficiencies there on the borrower's part.

I would suggest that the gentleman, whom I do not know --

THE CHAIRMAN: Mr. Pyles.

MR. O'CALLAGHAN: If he would call for the files and read them, I think we would be found to be all right on that project.

THE CHAIRMAN: Mr. Gilbert.

MR. GILBERT: I want to say two or three words in connection with the progress of the work of REA.

I do not know the full basis on which the tables were made, and I have not made any tables myself, but I live with the progress of REA projects from the day the loan contract is signed until the certificate of completion comes through.

I know you can make up tables and figures and take averages, and they may or may not give you a true picture of the situation. I think that in testing out whether or not we are making progress, we ought to take the average time of the typical project and not the average time of all projects, including those where borrowers do not perform, or where there is litigation or where there are unusual and frequent delays.

Now, without a table, I think I can tell you, with fair accuracy, that from the day a loan contract is signed until a project goes into construction, is not forty-two weeks or twenty-eight weeks or twelve weeks, but the average typical project goes into construction, as we are now functioning, in about two months.

THE CHAIRMAN: How many projects would you include in that average?

MR. GILBERT: I would include at least eighty percent of all of them.

THE CHAIRMAN: That would be what?

MR. GILBERT: That may sound strange to you, because you have heard a great deal about the great delays on the average project.

Let us differentiate between projects. Let us take a $500,000 project which goes into construction in two months, and then let us take a project of $6,000 or $10,000 that drags along for a year. Are you going to count those two projects as equal? Of course you are not. Over the last six weeks we have disbursed on a going business basis, putting out money at an average rate of $276,000 a week. That is nearly fifty percent of a $30,000,000 program. I do not think that that is bad. I think that is a pretty good showing.

I do not know that we are rapidly becoming faster on all phases of the work with which I am familiar. I do know that loan contracts are going out much quicker from the time of allotment than they used to. I do know that the Engineering Division is completing plans and specifications and construction contracts much more rapidly than they used to.

If the increase in production continues at the rate that it has been going in the last two months, in my humble opinion we shall be on this plateau about which Mr. Nicholson speaks by the middle of the summer. That is my humble opinion.

THE CHAIRMAN: Thank you. That is very encouraging.

MR. LAKE: I just want to say something on that because maybe I have not been reading REA right.

Let us take a typical project. I happen to be one of the first men here in the Industrial East to get into Massachusetts, Pennsylvania, North Carolina, Georgia, Virginia and Kentucky, and I should like to know what is the matter with Massachusetts-3-Franklin, that was allocated last August. Nothing has been done on the matter that I know of.

THE CHAIRMAN: We shall not go into all these, but I can answer that, so that no implications will remain. That went to bids. There were no bidders. That caused a considerable delay. Why there were no bidders involved a lot of things. Here is an isolated project. The invitation to bid went out at a time when the weather was bad. A good many contractors informed me, directly or indirectly that one reason that they did not bid was because it took so long to get money from us. We cannot charge all the delay to any one thing.

MR. LAKE: I am talking about all projects generally. We can pick out one at random -- for instance, Crawford-4 where the engineer got fired because he promised it in a year, and the farmers said they believed it.

THE CHAIRMAN: The power company came in and built spite lines, trying to break it up, and it took months and months of negotiations to reach an agreement and to transfer some of the lines. It has taken months to work it out. That is one answer to it.

MR. HERRING: It is all in the file, and you can get it by calling for the docket and reading it.

THE CHAIRMAN: In many cases what Mr. Herring suggests is necessary, namely, for somebody to stay with it. I think if somebody had stayed with Crawford-4 right straight through and had had authority to make a decision, or get it from the Administrator without anybody's holding him back, many things could have been decided and it would have gone on and been built.

I think the same thing is true of Massachusetts-3. Even though bidders did not come in, a way could have been found, if somebody had devoted his whole time to it.

In general we all realize now that these object lessons are wholesome and will suggest ways and means for preventing similar delays on other projects. That is the important thing, and if they do that, I think we shall all be satisfied.

MR. COLLINS: In connection with Mr. O'Callaghan's suggestion that they would like to get information from the Development Division earlier, I should like to say for your information that Mr. Nicholson has talked to our field men and given them instructions as to what they can do in helping the project sponsors select an attorney, and what the sponsors should do in corresponding with our Legal Division.

At the present time, the Legal Division goes over the project for the initial opinion before the project receives allotment, thus the Legal Division is notified of the project's coming up.

If there is any more information which we can give you or the Engineering Division, will you let us know? If we are not giving enough information, we shall be glad to do what we can.

MR. O'CALLAGHAN: I am sorry but I did not ask for information. I know you have twenty-three or twenty-four million dollars worth of projects under consideration. I asked that the allocations be speeded up and we get the projects earlier, at the expense of being charged with a longer time in working on them, so that we can begin to do actual loan contract work.

THE CHAIRMAN: Is that all you have to say, Mr. Collins?

MR. COLLINS: Yes.

MR. SWANSON: May I make one observation?

THE CHAIRMAN: Yes, sir.

MR. SWANSON: There has been one suggestion made which will be helpful, I think, all the way through. Up to about two or three weeks ago we in the Engineering Section had no inkling or idea as to where the Development Division was working or trying to develop projects. However, I believe through the good offices of Colonel Babcock we now have that in the chart which comes out through Mr. Freeman.

That will do this for us: If we notice that there are some projects in the Development Division which are being considered, and we already have engineers working in that area, then in dealing and talking with these engineers we can talk business with them.

THE CHAIRMAN: Do you mean one of our engineers?

MR. SWANSON: No, the sponsor's engineer. He can put a volume through in a lot less time than two or three engineers can put through scattered projects. I think that will be helpful to us.

THE CHAIRMAN: Mr. Johnston.

MR. JOHNSTON: Partly in answer to Mr. Lake, you (Mr. Carmody) said that one of the troubles about Pennsylvania-4-Crawford was the sabotage by a private utility company.

The Administrator said that North Carolina-3-Wilson was a blot on our escutcheon. I feel that Pennsylvania-4-Crawford is worse than a blot on our escutcheon. I think it is, if not a typical project, a project peculiarly full of lessons for REA. You were right in saying a utility company

had sabotaged Pennsylvania-4-Crawford, and in attributing part of the delay in this project to that fact. This sabotage has been going on since May 1935, and the company which has been doing this is the Associated Gas and Electric, Howard Hobson's outfit. At the very time that Howard Hobson's outfit was sabotaging Pennsylvania-4-Crawford, REA was lending money, or approving the loan of money, to Howard Hobson. We have continued to do that from the beginning up to now. REA has made six loans to the Hobson outfit, totaling something over $800,000. So that all the time that this man was sabotaging REA on the one side, on the other side REA was furnishing him with funds which increased his power to sabotage.

I understand that you (Mr. Carmody) in a humorous way, asked Mr. Herring whether the $300,000 allotted to Virginia Public Service Company might have been used in part by Associated Gas and Electric in Pennsylvania to sabotage Bradford and other projects there.

Mr. Deputy Administrator, may I say this --

THE CHAIRMAN: I think everybody knows how I feel about that Crawford project. I went up there myself to see it. As an organization we can take no pride in our handling of it, but we are talking now about the broad basis for our program, and let us not get too far into a discussion of particular individual relationships.

MR. JOHNSTON: Yes, sir, but may I just say this -- the matter of which I have spoken troubles some of us in REA who are committed very deeply, heart, soul and body, to the success of this enterprise.

THE CHAIRMAN: I had assumed, Mr. Johnston, that everybody here was committed heart and soul to the success of REA. It is obvious that four hundred of us cannot see the program in exactly the same light. Some see things one way and some another.

Let us assume this, Mr. Johnston: No loan, no allocation is made to anybody without the Administrator's signature. I think that answers the question. Have we faith in the Administrator, or have we not, with respect to particular loans?

Now, ultimately we have to work out an understanding with that company. We have some agreements with them

with respect to the division of lines and territories in certain counties in Pennsylvania and as recently as two weeks ago representatives of that company came to REA headquarters, met with our own development people, and this was the understanding that we had and that we are still working under in counties where projects are developing: That in those particular counties, Indiana and Clearfield, to whatever citizens had petitioned the company for service, the company would reply that a project was being developed through cooperative enterprise with REA, and that if that project and the sponsors did not serve the customers within a reasonable time, the company would. Nothing more could be desired than that. The project sponsors said this satisfied them completely. So let us start at that point.

MR. FREEMAN: Mr. Herring suggested that we take this green line, this first green line here and move it over to here at this angle (indicating on chart) to the $58,000,000.

I should like to point out what it will be necessary to do if that is done. We still have, if we regard the whole $50,000,000 as available, some $30,000,000 to take out of that pot. If the size, the average size of the projects, remains the same, it will mean that between now and the first of July approximately 150 loan contracts will have to be executed to use up those funds.

MR. O'CALLAGHAN: We have sent out $35,000,000.

MR. FREEMAN: We have sent out $35,000,000. Approximately $14,000,000 of which is under the old Act. That leaves approximately $21,000,000 worth of contracts under the new Act, and there are still $30,000,000 to go out under the new Act.

MR. O'CALLAGHAN: $29,000,000.

MR. FREEMAN: I want to point out that that means the production of one contract a day, approximately, the getting out and the execution of one contract a day, including Sundays, and I am wondering whether we can do that.

THE CHAIRMAN: Let us wind this up reasonably quickly. Mr. Long, do you have a question to address to us on this subject?

MR. LONG: I had noticed in the field and various places that there has been much delay due to the fact that no

satisfactory wholesale rate could be secured from the various power producing companies, either private or municipal. I think that something should be done, however, and the fact that allotments have been made for generating plants in various places suggests a solution to that very problem. If we provided generating equipment which could be made available, that could be used to temporarily energize the lines, at least until the rates could be adjusted satisfactorily, I believe that a condition could be brought about to speed up the completion of any particular project, however small, as long as it is acceptable to REA.

THE CHAIRMAN: Let us take that discussion up when we get to rates, because there are power companies that do have these portable plants and the idea has been advanced to REA from several sources.

Unless there is something else on this, let us go on to the next subject. I think we can leave it this way in general, that the men who are concerned with this program will arrive at a reasonable objective within the general plan, and then each of them for himself and all together will work out plans to achieve that objective during this fiscal year.

We have come to your subject, Mr. Ramsay, "High Lights on Public Relations" and "Is Our Correspondence Too Technical?" I do not know whether that last one was intended to restrict you or inspire you, but you made a little speech awhile ago and I was afraid you would get up now and say you had made your speech. I hope you will not.

MR. RAMSAY: I probably will be neither restricted nor inspired; I shall say what comes to mind.

I think, however, that the correspondence can be passed over very quickly. There is always room for improvement in that as in everything else. I have seen a lot of letters that I thought could be made a little plainer to the farmer or maybe even to the project lawyer or engineer. But it is rather difficult to generalize about that — I mean, you cannot generalize about it too much. I think there has been a vast improvement in that respect since we got started. At one time even the things that were proposed to go into pamphlets for general circulation were decidedly over the heads of the people at whom we were aiming. That was improved gradually, by consultation and agreement. It was not the achievement of any one branch, particularly the branch that sponsored the pamphlets. Everybody contributed to it.

The other handle of this topic, which is big enough, I guess, to cover almost anything, is "High Lights in Public Relations." Actually, I do not intend to follow that topic very much, either, because while there are high spots in public relations, I do not think the high spots are the important thing at all. The big thing and the vital thing about public relations is that it covers or is influenced by and affected by just about everything that REA, or for that matter, any other organization does.

Everybody helps to make the public relations, or sometimes, unfortunately, to mar them. It is that phase of it that interests and concerns me most broadly. Anything that the engineers, the lawyers, the accounts or the utilization people or anybody else does influences public relations in a very definite way to the full extent that it involves any sort of contact with the public, whether with farmers, farm leaders, members of Congress, Senators, governors -- well, the list is endless. But wherever we have any sort of contact with the public, no matter who makes it, we either make the public think a little better of us or a little worse of us, as the case may be. We build at one point and tear down at another without actually knowing where we are tearing down or building up. It is only when we take stock, if we have time to do that, that we find out whether we have built up more than we have torn down, or vice versa. Actually, it usually works both ways and works simultaneously.

There are one or two horrible examples in this field which I hope I can cite without individualizing them in any way, or even departmentalizing them. There was an instance sometime ago where certain people who are not in the Government at all, but who represented an industry with which we have had and I think should have friendly relations -- in short, it was not a power company -- came in and wanted certain things passed upon by us. They got to one man and went round and round and round for a couple of months, getting nowhere at all. They were pretty desperate and extremely sore. They came back. They took it up in another way and were directed to a different man, who, incidentally, was in exactly the same division as the man with whom they had been dealing in the first instance. In three hours he gave them the answer and the answer was "Yes". As a result, they would have gone away happy had it not been for the two months time which had elapsed before when they were kept standing about and in effect were being "pushed around" repeatedly. That probably hurt a good deal, and it is the sort of thing that we ought to use every effort to prevent.

The best thing, I think, that could happen to the public relations of this organization is to have the various branches of REA, all of them, working in step -- I will not say all of the time, but as nearly all of the time as is humanly possible. It has been suggested to me a number of times that a certain policy or a certain proposed practice which one department favored or perhaps several departments favored, but which appeared to have a certain measure of opposition elsewhere, was going to be "simply great" for our public relations. Quite possibly that was true. In one or two instances I feel sure it was true. However, if the practice had been instituted without all of the departments having a part in it and being fully informed about it, and fully sympathetic with it, I think it would definitely have hurt us and would hurt us hereafter if it should be done.

The trouble with that sort of practice, when not everybody agrees with it or fully understands it, is that we start somebody, some outsider, off on a given course with some member of the organization; then he comes along a little later and encounters another branch and is quite likely just yanked up short and told "That is not the thing at all!" Then an attempt is made to start him off on something else. I do not know anything more fatal to any sort of good public relations than to tell a man one thing one time and a little later tell him that it is all wrong, that things should be done another way.

The only way that such trouble can be avoided, of course, is to have the fullest understanding about new practices before they are instituted. Everybody, even if he does not agree with it at the outset, will then of course go along with it and give it his support, as is our practice here most of the time. If that is done, I do not think there will be any sore spots. It is only when somebody is not informed or somebody gets out of step and when we begin telling two or maybe three different stories at the same time, or at intervals not very widely separated, that we begin to get into trouble.

THE CHAIRMAN: I do not want to orient your thinking or your expression at this point --

MR. RAMSAY: I was just thinking what to cut out here.

THE CHAIRMAN: That is all right, but I should just like to ask you a question and maybe you can clarify something which just occurred to me: That public relations is not getting

something in the newspapers, it is not going to an editor and telling him a story, but public relations apparently consists of all the relations that any member of a staff of this kind might have with any outsider anywhere. Is that true?

MR. RAMSAY: Exactly that.

THE CHAIRMAN: Why do you not clarify that?

I was in charge of public relations in a situation where I never had any publicity. There was none to be had. We were back in the mountains. The only contacts that they had were with us, officials of the company running from the president down to the mine foreman. We had a very difficult problem there all the time, but it was a problem of public relations that reached even into our relations to the miners' children in the school, the school superintendents, and all the rest. We had no newspaper, we had nothing. We never thought of doing anything except talking to the people. Our job was to explain ourselves to them so clearly that they understood, or to understand their problem in such a way that we might modify our own conduct with relation to them. It had not occurred to me before that that was public relations, and that that is what you are talking about here. I thought you were going to talk about how we are advertised to the world, but you have got it off on another base.

Do you want to say a word about that a little more clearly and definitely? I did not even know you were saying it until the very last moment, when you hesitated there. Are you saying now that you are interested in the opinion that people carry away with them after they have come to see our people in the office?

MR. RAMSAY: I am saying exactly that, or will say it so far as you have not.

THE CHAIRMAN: Maybe you said it and I did not understand it.

MR. RAMSAY: I am more accustomed to doing things in this field than to talking about them.

The approach and the viewpoint that you suggest are of course the vital approach and the vital viewpoint. I realize that many people do think of public relations in terms of publicity. In the organization that Mr. Carmody mentioned, the complete absence of publicity would be something of a handicap, but by no means a disability. If

he had a good crew and they were full of spirit and in step with one another, knew how to tell their story and to see the other fellow's viewpoint, to explain a program and do all those things, in short, to keep on friendly terms with the people with whom that organization had to deal, he had a successful organization and he had the most successful sort of public relations, no doubt.

THE CHAIRMAN: One of the best men in our organization up there in the mountains, from a public relations point of view, could not read or write. He was illiterate, but not unintelligent. He was a very intelligent man. He understood human nature and got along with people. He adapted himself to them and got them to adapt themselves to him when he thought that was the right thing to do.

I see this public relations business in a new light. It is neither very technical nor very complex if we think of it as simple, day to day, human relations.

MR. RAMSAY: It is there all the way through. I shall not attempt a detailed exposition of it, but it starts with the case of people who come to see us, with whom we have contact face to face. It starts when they enter the front door, with the way they are received downstairs at Massachusetts Avenue or with the first person they meet at K Street. If they are well received they start off with a friendly feeling that is helpful, especially if they are going to get bad news when they get upstairs.

It follows all through, naturally and inevitably, into the Legal Division, the Engineering Division, the Development Division, and all Mr. Taylor's branches, if they have to go to Accounting or to Personnel or anywhere else. Russell Cook has probably had as much to do with shaping our public relations as any other one man in the organization in the way he has handled people who came hunting for jobs, because there he could have made friends or enemies, not only of the people who wanted the jobs, but of the Congressmen who wanted them to have the jobs, of their families back home, their friends, and probably some farmers that they happened to know. Probably some of them reported thereafter either that REA was a great thing or that it was a frost and maybe a fraud.

I think you get an aggravated manifestation of all this when you get people in and have repeated contacts with them over a long period, when they come in about projects

and actually succeed in getting started, then go on from one of our divisions to another division. There you get at once on dangerous ground from a public relations standpoint, because one department necessarily will have a little different viewpoint from another. If one department is not extremely careful in handling people, it is very likely to accentuate the difference between its viewpoint and its practice and the viewpoint and practice of the department the fellow has just left. Pretty soon he gets the idea that we are all in disagreement among ourselves, and his next conclusion, if he is not well handled, is likely to be that we do not know what we are doing. I know that here and there we have encountered some people who did go away with that idea. If there are not too many of that kind, we will get by with it. If they became very numerous there would cease to be any worth while public relations at all, and then it would be time for us to go home, or somewhere else.

There has been some reference here several times to bluntness, mostly in reference to one department. It probably is not altogether limited to one department, as a matter of fact, but I have been up against that for a good while, and I have one or two ideas about it. There is bluntness here and there is more bluntness than there ought to be, but there is also sometimes an attitude of mind that gets by or, you might say, even masquerades as bluntness, that is not really bluntness at all in any true sense. It is rather a sort of conviction of rightness or of righteousness and a determination to show the other fellow up as wrong, if it is thought that he is wrong; he is dealt with on that basis and in those terms. Then when that manner of dealing with him is challenged, the matter is laughed off by saying, "Well, of course, you know we are pretty blunt people and we try to say what we mean." That is not a healthy condition of mind and it is very, very harmful.

If I have not made that clear, I will state it another way: Sometimes what is called bluntness is merely a way of saying a "No" which perhaps does not have to be said at all. Or if it needs to be said, it could be said a little differently. Sometimes it is a means of saying in effect to the other fellow, "Try and get it" when you should say to him, "I think we understand better now what you want. You did not go about it in precisely the right way, but we get your point now and we shall try to do it for you." The blunt "No", part of the time and the "Try and get it", at any time, are entirely out of order. Their effect upon the organization is ruinous. If they are not avoided at least most of the time we shall get nowhere at all.

I am talking frankly about the things that bother me and not about the things that often make me feel pretty good. I think it is more important that we do that right now.

With regard to the question of progress with this program, I am interested in that only broadly, only insofar as it affects public relations, but it does affect them more than any other one thing, and therefore it is an important question.

In dealing with people outside as in dealing with people inside, when our progress, lack of progress, or slow progress is brought sharply to our attention, some of us resort at once to a defensive attitude. Defense can easily be overdone. Actually the thing we should do is to find the means to correct the condition. Moreover, the defense after awhile ceases to have any good effect. You cannot spend a lifetime making alibis to people. If the thing that you have promised them is feasible at all, if it can be done, you have to do it, and stop telling them why you cannot.

I am reminded of a little jingle which some of you who are old enough may have once known, about the fellow who was extremely correct in all of his positions, but nevertheless came to a sad end. The jingle runs like this:

"Here lies the body of Jonathan Hay,
Who died maintaining his right of way,
He was right, dead right, as he sped along,
But he's just as dead as if he'd been wrong."

I will not close on any funeral note, as I do not think that an epitaph is the thing for us. I feel that we are going places. But if we have too many of these defenses, too promptly offered to too many people, we are going to be seriously impeded in our efforts to get somewhere.

THE CHAIRMAN: Thank you very much.

(Fifteen minute recess)

THE CHAIRMAN: Let us assemble. Before we recessed, somebody wanted to comment on Mr. Ramsay's statement. Was it Mr. Gundershaug? Where does he come from?

A. He is one of our construction engineers and has a large background in the construction field.

Q. When did he come to work?

A. About six months ago.

THE CHAIRMAN: All right, we shall hear from Mr. Gundershaug.

MR. GUNDERSHAUG: I was going to comment on public relations. Now, in public relations, we must be able to do what we promise. In other words, when we get out in the field, the farmers there say, "Well, we expected you to be able to serve us over here. We are two, three, four or five spans away from the road. We understood that we could get service and now we have to pay for three, four or five poles and three, four or five spans and we expected to get that in the loan." Now, the loan contract says they cannot give more than one span and one service drop. There is the whole problem. Public relations depend upon this. The whole point is this: When we promise something, we have to keep it. If we do not, we do not have public relations. We had a public relations man in North Dakota - -

THE CHAIRMAN: (interposing) We, meaning whom? For the purpose of the record.

MR. GUNDERSHAUG: The Community Public Service Company. I came out in March to North Dakota. It was a hot day and they jumped on me and said "You promised us everything. We are not getting it. That land unnecessarily cost $60,000 because we had to put in a plant, a standby plant and there was no need for it." Just because we went in there and promised things that we absolutely could not fulfill, it cost the company $60,000 and so it is with us. If we go out and promise things that are absolutely impossible to fulfill so far as the loan contract is concerned, we are harming our public relations. That is all.

THE CHAIRMAN: Than you. That is a good comment. Mr. Taylor.

MR. THEODORE TAYLOR: I just want to say a word about public relations. We receive in the personnel office a large number of applicants for positions. Often they get into another office by mistake. Employees in offices thus visited have a very important effect on the applicants. I want to say that we in the Personnel Section have appreciated the way other members of the REA staff have acted in these relations and their willingness to direct these applicants to us.

THE CHAIRMAN: You men appreciate the value of an executive's time in handling those people and sending them to you.

MR. THEODORE TAYLOR: That is right, and also the time of the stenographers and clerks in those offices. I should like also to express further in connection with public relations, that we in REA hold the cards, and, as the Administrator said in the July conference, we can for this reason afford to take everything the public gives. We have the last word.

THE CHAIRMAN: Thank you. Does somebody else have a comment?

MR. ZINDER: There are times when we roam around really startled with the information they have to tell about the REA.

THE CHAIRMAN: Who are they?

MR. ZINDER: The Public Service Utilities and other people, that is, officials having State positions. I was just wondering how we could possibly make our literature more effective and demand more attention. I know that tons of literature go out explaining many of the things which I am very glad to explain when I go among these people which they have never known about.

THE CHAIRMAN: Let me make a suggestion. You put in writing the things you think ought to be released to these people, suggesting the form in which it ought to be released, more or less fragmentary, and when it ought to be sent to them. The people in those public service offices, the men you speak of in these responsible positions, require certain specialized information, not general information, with respect to the Rural Electrification Administration. You suggest that and say whether it is advisable to give this information in a letter or in bulletin form. Find out too whether they are on the mailing list. Mr. Ramsay, do you want to say a word?

MR. RAMSAY: I should like to know first if these people have had anything from REA, if they would so indicate. And in order to get as much information as we can, I should like to know at least a few of the points that they specifically would desire or about which they are not informed.

THE CHAIRMAN: There is not a single person who goes regularly into the field who does not encounter questions that ought to be answered. In addition to the report that the person makes to his immediate superior on his specialized job, every person who goes into the field ought to be required to send back questions that are being asked, and suggestions that arise in his mind as the result of his contacts. If those things go immediately to the right person, perhaps we

shall have better public relations or public information service. I think we ought to get that established in our minds. I have said repeatedly since I have been here that we do not take advantage of the field contacts that so many people are making every day in every part of the country. We must do it. It is not enough to file technical reports in the file. The information must be disseminated. Sometimes we shall find answers to the questions that the men to whom the questions were addressed could not give.

MR. RAMSAY: Here is a case in point. I hardly got off my feet talking about a few things that were not just as I should like to have them when Mr. Bacon of Development approached me and told me that on one of our booklets there is a certain amount of kickback. There is a picture of a farmer on the cover which has the suggestion of a hayseed about it. Some people do not like it and some of the power companies who are not friendly have made some capital of that. In any phase of the work with which I have had anything to do, we have had a minimum of the defensive attitude. We have always wanted any suggestions that we could get on how we could do things better and particularly, suggestions about where we were not getting the story across. On that point, we are certainly going to seriously consider changing that cover. We shall make changes always when we are told where we are off the track.

THE CHAIRMAN: That is a fine idea.

MR. LONG: I have found that that picture on the cover has been very offensive in many sections of the country because the picture represents a farmer all turned out in a good pair of trousers but with a jacket all torn to pieces. The farmers are not like that, so to speak. They are not hayseeds. A great many of them are graduates from universities of agriculture. I have heard that comment from one end of the country to the other.

MR. RAMSAY: May I say one word of defense? We do not like it in the light of the information we are getting and we are going to ditch it; but he <u>is</u> a farmer. Furthermore, one of the best photographers made the picture for us.

THE CHAIRMAN: I have been conscious as I suspect most of you have been, that as a rule where there is a rural program, there are entirely too few people who have a rural background and especially a recent rural background. I think somewhere in the organization we need more farmers.

MISS TAYLOR: I am a rural girl, 100 percent.

THE CHAIRMAN: There is no such thing as 100 percent.

MISS TAYLOR: (continuing I was a rural girl. I do think we ought to remember that the rural people see the same moving picture shows, buy their clothes from the same stores, hear the same ministers and buy their automobiles from the same companies that city people purchase them from. There are really not many ways in which they are different from urban people in their thinking. We are a lot more like city people than the city people think we are.

THE CHAIRMAN: A tremendously important question is that of rates, wholesale power rates. Mr. Zinder is head of the Rate Section. You know him. You know something about the way he handles some of the problems. He is going to talk about rates. Recently when we were discussing this matter and he was complaining because I was not satisfied with certain rates I had seen, I said, "I know nothing about rates. I only know they are too high and regardless of what you do with respect to rates, as far as I am concerned, I shall never be satisfied." If you accept that, you must not chafe every time you hear a complaint from me at least. I am not going to be satisfied and no matter what you do, it will not be enough.

MR. ZINDER: I have accepted that as a challenge and I hope some day we shall get something that will satisfy you.

At the time the policy was determined that these projects would purchase their energy, a very vital decision was made. In purchasing their energy, a measure of control is given over the project to an outsider or outsiders which in many instances is a private utility company. That measure of control is not only an element in the total cost of service which would enter into the rate the members would have to pay, but also we learn very shortly in the contract what the private utility asked in the terms of that contractor rather what they requested from the cooperative. I was very much surprised when I saw some of those provisions being requested. I need not enumerate many of them. It is not unusual to find that a private utility company, after it has agreed to serve the project -- and, incidentally, some raise many barriers before they even say they will consider rendering service to these customers -- will request that the plans and specifications must have their approval -- in other words, the construction shall be satisfactory to the companies.

THE CHAIRMAN: Give us an example of a company that asks this. Are they still asking?

MR. ZINDER: Yes.

THE CHAIRMAN: Is it customary?

MR. ZINDER: It is not included in the contract.

THE CHAIRMAN: Do they take it out?

MR. ZINDER: It has been asked in the contract and is being asked of Rate Section.

THE CHAIRMAN: Are they trying to fit it into a system they hope to buy?

MR. ZINDER: I cannot answer for the power companies.

THE CHAIRMAN: I never heard of that before.

MR. ZINDER: I have to admit that I have no patience with it either, Mr. Carmody. It is something they have requested and we have emphatically rejected. Another provision, one with which a great many of you are familiar, is an attempt to control the retail rates the cooperative will charge. I am rather happy to say that that was narrowed to one company in the country and has now been eliminated. However, we had to battle approximately a year with that company.

MR. FISHER: Have they given in?

MR. ZINDER: Yes.

THE CHAIRMAN: That was a struggle for a principle as well as a point. The Administrator would not surrender.

MR. ZINDER: It took a great deal of pressure and discussion and finally, after almost a year's time, we have that eliminated. However, I might state that in discussing wholesale contracts generally, it has not been uncommon -- it has been rather frequent -- when this question of the retail rate the project will charge has come into the discussion of private utilities, and whereas they have not requested it in the contract, they felt us out to see whether it could be included. We have taken a test case on it.

There are some of the provisions in the contract which are almost introductory and very vital to the statement indicating the matter of control given to outsiders

over these projects in accordance with the adopted policy of purchasing energy wherever available -- and it is available from one source or another in most areas in the country.

With regard to wholesale rates, there has been quite an evolution and I am happy to see some progress perhaps not enough. I feel that we have made progress, starting from a time when they refused even to quote rates to us. They finally came out with rates -- but they were too high. They got those down and then the contracts were not acceptable. However, contracts are gradually getting to the point where they are acceptable. Now, for many of the large systems of the country, at least, there has been established a rate schedule which we felt we could accept at the time. We feel we can improve upon some of those accepted and have started to do that. The theory we went on, with regard to wholesale rates and these contracts was -- granted that they were not everything we wanted and felt that these projects could have -- that the idea was to make the contract terms short, comparatively short, five years at the most, and thereby have another chance at them after the project has progressed from the stage where simple talk and arguments can be used. We do not know what the load is going to be and what the power factor entering into the cost will be.

With regard to municipal utilities, the success and failures -- and there have been some failures to get satisfactory rates from municipal utilities -- our experience has been rather spotty. We have had our very best rates and very best contracts from municipal utilities and I still feel that our municipal utilities can be the best sources of supply for most of these projects because I feel that they will get some considerate attention and much more help, of the type for which we do not have to pay a fee.

Unfortunately, we have had some problems. A problem arises in that we should have negotiated lower rates from municipal utilities than we have secured from private utilities. That raises a differential which I know is a question in the field but yet I feel that we have to proceed on that basis, perhaps temporarily, until we can get that straightened out. But it takes a little longer to get rates from a private utility than from a municipal utility.

THE CHAIRMAN: This is an important question in Iowa. Representatives of the Municipal League say that we are wholly unreasonable and that nobody can do anything with us. We

have to meet that issue. If we are wrong, we have to admit it. If we are not wrong, we have to work something out with that group because it spreads from State to State. They have the right to question our position in these things if they are not getting a square deal. With a concrete example, I think people will understand better what you mean.

MR. ZINDER: I think I might simply indicate the answer I have tried to give for it, which I found has been effective in a number of cases. I think there are two elements invovled in that differential, one is our failure to be beaten by the larger fellow and the further actual difference in costs -- at least costs as they are presented, and as we do not know them.

THE CHAIRMAN: There may be another element and at least, an apparently greater responsibility on the municipalities to take the same sort of care of surrounding country that sustains the town as they do of the citizens.

MR. ZINDER: In the light of this question as to the policy which has been more or less established, that the REA has not adopted a single rate schedule either in form or otherwise which it considers essential, over the entire country or even over a single State, I understand that the Administrator's thought is that each source of supply should make the best possible rate, a rate based upon its own cost to serve plus a fair margin, return or profit. Now, having that basically as the policy, we are naturally going to have differences in rates. We have the condition wherein they all go down to the cost plus a fair profit basis but when they are all above it as we feel they are, a difference in cost between the various municipalities and private companies is probably wiped out. However, we are on that theory and, therefore, under these terms and conditions in rates, as soon as there are differences, one is high and one is low. So much for the question of wholesale rates.

I might make a few remarks about the form of rates and about the general levels. We have generally stated that a small project normally requires an average rate of approximately 1½ cents per kwh, and very large projects should have a lower rate. Now, you say we must have a feasible project as the attorneys state and as the Act requires. There is not any basis, I have been advised, on which we could actually turn down a rate schedule other than for a rate at which the project would not be able to pay out, and would not permit the liberal use of service and we must tie back

to that. Therefore, we have simply this broad approach. There will be exceptions. There will be some projects which will require a 1 cent per kwh average in order to make them pay out. We hope to get that average where necessary. In other cases, it may go to an average of 1¼ cents, and others 1½ cents. For the very large projects, less than 1 cent per kwh should be possible. Now, I think most of you know the emphasis I have placed on the bottom price of any wholesale rate schedule and I cannot over emphasize it but I think, whereas the field men have been getting bottom prices of around 1 cent and the Rate Section has been equally successful with private utilities, that we ought to go below that in the future -- possibly 8 mills. We found water heating being sold around the country at 1 cent per kwh. It should be possible for REA to adopt water rates for 1 cent but it cannot be done if there is a wholesale rate of 1 cent. It is only through developing water heating in certain sections of the country that we are going to build up loads.

Now, on the retail rate, at the present time we are trying to defer determining or suggesting a retail rate to borrowers until the bids are in and we have some definite figure with regard to the investment per customer and per mile of line. Until that time, that very important figure is only an estimate. However, we have appreciated the need the field men and project sponsors have had to get some indication of the cost of electricity to the farmers who are entering into the cooperative. We have gone this far: We have indicated a minimum bill that will probably be necessary, based upon the first information that comes in from the field and sometimes we have gone so far as to indicate the price of a 100 kwh's. However, we emphasize that that should be given as approximate. We have had a few instances but fortunately, not too many, where a definite rate schedule got into the hands of the project people one way or another, when we in the Rate Section of the Rural Electrification Administration did not know about it until very late; sometimes members have been sold on that definite rate.

THE CHAIRMAN: Do you mean our wholesale rate?

MR. ZINDER: On a retail rate. They have gone around to their members and signed agreements or have gotten their agreements that that would be the rate schedule, that it would be the maximum bill. And that it would be $2.50 or $3.00 when it was necessary to have it, say, $3.50. There is a certain amount of flexibility in determining the size

of the block and prices but beyond that it is almost impossible to say, conscientiously and truthfully, that that rate schedule will permit this project to collect enough revenue to pay out. For that reason, we should like to have the matter just approximately determined and a complete rate schedule withheld from the field and from the project sponsors until we have had a chance to settle finally the wholesale rate question and get the bids so that we can give then a complete schedule of rates. As far as that goes, we should like to have only one schedule but the Rate Section is here for the purpose of meeting the special problems of seasonal customers, large power customers or any other unusual customers there may be in any project. Some may have a summer resort and others may have a fair!

THE CHAIRMAN: Such as a three-day county fair.

MR. ZINDER: That is right. I have roamed and sketched very briefly. I just wanted to hit the high spots. I have one thing I should like to submit for discussion and that is this: I feel in dealing with many municipal utilities that they are anxious and willing to go along but they are facing a problem of putting in funds for new equipment. We have to recognize that in the municipal utilities that is a real problem, especially in those States where it is necessary to go back to the people, the electorate, to issue further bonds. I think it would help if the funds could be made available and if we could establish some policy whereby we could assist in the financing of additional equipment. I know all of the problems involved in such a thing but I think they might be worked out and, to my mind, it certainly would be in a number of instances, a very definite advantage to the project for the municipal utility which cannot post a rate to a project because of the additional equipment it would need, if we could make additional equipment available.

THE CHAIRMAN: Does that mean a provision in the Act?

MR. ZINDER: No.

A. It is a matter of State law.

MR. ZINDER: Is it a matter of State Law, Mr. Moore?

MR. ALLEN MOORE: Yes.

MR. LAKE: Can they not get that money from PWA with a grant?

A. It can probably be worked out on a joint ownership basis.

THE CHAIRMAN: Obviously, we cannot settle that question here. Go on with the rest of the discussion.

MR. BACON: Some of the companies who sell Diesel engines will sell the municipality a Diesel plant with the understanding that the municipality pledge only revenue from that Diesel plant and on the strength of a contract with our cooperatives to buy the current, the manufacturer will sell the municipal plant and establish that as security.

MR. ZINDER: In discussing that question with a group just last week, it was found that they were required to pay five or six percent. They should like to have some of our 2.77 percent money. When they see that money available, naturally they want it and are asking for it.

Q. Nine percent on that Diesel, is it not?

MR. ZINDER: There is amortization and some commission.

MR. FISHER: Mr. Chairman, there are two comments I should like to make to supplement what Mr. Zinder said, in no sense contradictory. The first is with respect to comparative rates. Mr. Zinder pointed out that we are opportunists in getting the best rate we can at the time, but I believe it is going to become increasingly necessary to consider comparisons.

I received a letter last week from an old friend who is manager of one of the Iowa companies and in whose territory we are going to build two generating plants. He was more than a little hurt, terribly hurt that we were going to build two generating plants in his territory, particularly. I pointed out to him in this purely personal reply that I thought our building those plants was based solely on the fact that we had gotten eight successive quotations from him before we finally thought we had all we could expect, but that we were thinking about the effect on these other municipal plants that had already given us a lower rate than his eighth quotation offered. I said that in doing this, we built these plants about the same way a man buys an automobile. Our motivation is probably in the economy of the car and also in what the neighbors will say. I thought that this was increasingly more just what our neighbors were doing with respect to our wholesale rates because he, in this very letter said, "We expect to cut our rates in Wisconsin and Minnesota." It was obvious he was not considering the wholesale cost. He was willing to bargain with us and I have no doubt but that the utilities of

the country are comparing notes as to what they can get away with, so it seems to be increasingly difficult for Mr. Zinder to chisel down. Now, I am told that when the REA was being established and being discussed, the utility executives of the country themselves were willing to visualize a wholesale cost of current which would average 1 cent per kwh. I know very well that we do not have that yet. We are probably closer to a 1½ cent rate and I have no doubt in the world but that we have made many loans to projects, at the cost of 1½ cent per kwh, which are going to give us distress and trouble before we are through, and which would be more likely to pay out if the rate were on the average only 1 cent per kwh. I think Mr. Carmody has good reason to tell Mr. Zinder it is all in Mr. Zinder's lap. It happens to be at the point of frictional contact. Our field men in contact with these municipal plants are all for reducing that spread from a 1½ cent to a 1 cent average which I believe will have to be our ultimate goal. It is interesting to see that, because these companies are more or less integrated or interrelated and do pass the word down the line very quickly. This is certainly no challenge to Mr. Zinder. I am sure that Mr. Zinder has had quite as much to do with this as the field men. He has graciously ascribed to them most of the results with the municipal companies, but he is hand in hand with the municipalities in negotiating for rates with the utilities. It is significant that perhaps no more than twenty-five percent of the generating capacity of the country is in the hands of the municipal plants.

THE CHAIRMAN: Why?

MR. FISHER: Well, say within twenty-five percent. From the rate studies in the Development Division, it is shown that sixty-five percent of the current we are buying or propose to buy for the projects already approved, was to be purchased from the municipal utilities. This shows that they have come through a great deal better than the private companies. This is partly because we have not had to bargain with them collectively. We have the advantage of individual bargaining until it comes to a little company down in Texas and there, I am convinced, we are faced with the task of collective bargaining for our rates.

Many have said that our greatest problem in rural electrification is utilization. I am willing to admit that is problem number one but certainly the problem number two is lowering wholesale rates. In fact, the two are closely related. We can probably say those are the two aspects of two problems.

THE CHAIRMAN: There is one thing that you did not mention: These larger companies that spread over many States and sometimes integrate are protecting rates that they themselves know will come under attack if the wholesale rate they give the cooperative enables the cooperative to retail at a lower rate than they are getting. That is really the crux of the matter in my opinion. Without exception when we have crowded a utility, it has always come to that and they always get away from it as soon as they can.

MR. ZINDER: I should like to comment on your and Mr. Fisher's remarks very briefly on this comparison of the rates and the fact that we do and are battling with it. There is nobody who appreciates it more than you, Mr. Carmody, and it is very irritating to me when a small private utility in Texas submits a rate schedule for an REA project which is identical in form with one submitted in Maine. We see that daily. They are simply called upon to submit a rate for an REA project. They do not know what to do -- and they do this. They find out who else is submitting a rate for an REA project.

THE CHAIRMAN: Some of these cases occur where it is a local problem and not a State problem.

MR. ZINDER: That has made it difficult but we have been able to beat it at times. Recently one large company group, located in the Southwest and one in northern part of the Middle West have both adopted the same rates and we were able to get a lower rate in the Southwest than we got in the Northwest. So we have been able to drive down, a little, the conditions that we felt existed. In regard to this question of discrimination, they are afraid of their rate structures and are getting down to lower rates for these projects. We are now in a stage where the pressure has been so great that they are finding special reasons for making special rates. We are getting to that stage now where they are letting loose or breaking away from existing rate structures to get down to lower rates for REA projects. We have had recently two sources, one of which was forty-five percent below the level of rates to municipal utility customers than that company had. In other words, a municipal utility buying is comparable in many respects to a rural cooperative, but the rate they are offering this rural cooperative is forty-five percent below the rate which they have considered standard and which they have on file with the Utility Commission.

MR. HERRING: You might state why the public utilities commissions allow these municipal rates.

MR. ZINDER: I do not know whether I can explain that.

THE CHAIRMAN: You mean there is a difference between a statement and an explanation of a statement. You make the statement and let Mr. Herring give the explanation.

MR. ZINDER: I should like to repeat a conversation I had with a chief of staff of one of the larger public utility commissions on that very question. As to the question of discrimination, any difference in rates, to my mind, between one customer and another is discrimination, perhaps not in the technical sense -- but the Public Service Commission must decide whether it is reasonable or unreasonable discrimination. I think for many years anyone who has had commission experience knows that utility companies have been able to come to the Public Service Commission and say, here is a load that differs in such and such a respect and we want to appeal this rate for that load. Some of them have gone so far as to say that they wanted a special rate for brickyards and a special rate for some other industry. Some of the more aggressive commissions say, no, you cannot do that. Rates can be appealed only for such industries as are different in their load characteristics but not for those that are alike. That has all been on the other side. They have been able to ask for special rates where they want to get them. On the other hand, where the Commission wants a rate for certain types of use, the utility cries discrimination. It has not worked both ways. I think in this case we can use the argument that here is a special rate for certain types of use. In response to request, Dr. Levin has been making a study of just that question and I have been able to peek at his results before they were finally gotten together.

THE CHAIRMAN: In various States?

MR. ZINDER: It is according to the financial condition of the customer, the value of service in developing a new market and various reasons for determining special rates that I think the argument of discrimination is weak from two points. That is, first of all, it is not something that has been on the other side, it has not been requested. Secondly, we do have a justification for requesting a special rate. However, I might add just one more idea if my time is not going too far, Mr. Carmody, in discussing this thing further. There is one point and that is, I think, we, Mr. Cooke and many others are convinced that costs are such that they would permit rates as low and lower than we have been asking and getting. If we say that is justified only because of certain reasons,

we throw away our cost arguments. We simply say it is all right here, and in effect we indirectly support the utilities in that other rates should be higher. I do not think we have that feeling. However, the idea of making a special rate is simply an expedient to get what we want and let the other fellow come in after us and fight for what he wants on the same level. I do not know whether I made that clear.

THE CHAIRMAN: It is not clear to me.

MR. HERRING: The point I wanted to make is if the utilities want to do so, they can make a separate request for a special rate and it is not discrimination in the eyes of the commission. When we ask them to make a special rate for REA projects, they immediately come back and say it would be discrimination. It is all wrong.

There is another thing to remember in connection with the wholesale rate. Only in a very few instances are transmission lines loaded to anything like capacity. They are not yet approaching a load of 100 percent capacity. They have the capacity to take care of additional load. The small amount of energy we need on any one of the projects in which we are interested does not mean anything in the way of revamping or reinsulation of lines. Therefore, there is no reason why if the utilities desire to do so, they should not take the fuel cost plus the line losses and give a more favorable rate. I know when I sat with Mr. Cooke and with representatives of the utilities, before the Rural Electrification Administration was created, we discussed everything that might come up in rural electrification work. Among those things was the cost of wholesale energy. The statement was made by representatives of two large interests, that in their opinion the wholesale rate should be around 1 cent a kwh, qualified to the extent that when small companies were dealt with the rate might be somewhat higher, but generally it should be about 1 cent per kwh. I know we have not as yet any such rate.

THE CHAIRMAN: Yes, Mr. Wood.

MR. WOOD: I should like to make a few remarks concerning the public relations connection municipally owned plants have to our projects. During the number of years I have been connected with municipal work and last summer while doing field work for REA certain conditions have been brought to my attention, which no doubt have been given consideration

by both Mr. Zinder and the field men. Many municipally owned systems seem to be forgetting that they were organized to produce and sell electric current at the lowest rate possible or without profit. I am referring to the pernicious policy of making municipal plants earn a sufficient revenue to carry a part of the tax load usually borne by real estate. Very often they get by with this. In dealing with REA there is a feeling that if a profit can be included in the rate so that city taxes can be reduced advantage should be taken of the situation. It has occurred to me that in our contacts -- and everybody in the field comes in contact with municipal projects -- perhaps the thought could be stressed that there is, after all, very little difference between the city and the territory surrounding it. Wherever reasonable rates can be arranged it will help not only the cooperative and its rural members, but will, in turn, react beneficially on the city, because whatever helps the surrounding country helps the city itself and the people living in the city.

THE CHAIRMAN: One of the most difficult things in the world to operate is a democracy, and it is especially difficult to lay successfully side by side systems that are as different as a profit making system and this system of social service. One drives the other down. Now, the difficulty about meeting this problem is that the people as a whole, forget after a while that they own the municipal plant. The people who are most concerned about it, the city council, and mayor or city manager, are constantly striving to make, and are under pressure to make, the same kind of profit as is expected of a private enterprise. The sole object of all government is to give benefits to the people. If it did not give benefits we would not need government, but people lose sight of that fact. The people who are in charge of these operations want them to be profitable, efficient and effective and want to be as proud of them. If they do not show a profit and the people do not get a rebate on their taxes, they blame the city officials. They lose sight of the larger objective of rendering service.

To me, a most important idea presented is this, that the town by and large is supported by the hinterland. The town does little for the country. I never could understand why the town does not understand its relation to the country and provide not only lower rates but all manner of services that would be a convenience to the farmer. In my time, when we went to town once a week, there were at least

hitching posts reserved for the farmers and often back of the general stores there were sheds under which only farmers could put their horses and buggies. You do not have that today. There is no provision in towns for taking care of the farming people who come to town to spend money in the stores.

One day in Texas, I was accompanied by a man who slipped and fell on the ice, the by-standers laughed at him for falling. I said, "Stupids, why don't you put some salt or sand on the ice so your customers won't break their arms." It was typical of our lack of understanding in public relations. There is a point there. These municipals could do just that and as a matter of fact, the power companies have exactly the same responsibility and the same opportunity to increase their revenues as do merchandisers. They lack imagination. They have no sense of merchandising. The municipals ought to learn merchandising from this new angle. So far they count only the dollars they see come back over the wire.

MR. PACKEL: I think many of us will be interested in Mr. Zinder's experience with the provision preface that many utilities are insisting on putting in the wholesale contract that the cooperative will not resell outside of a certain territory.

MR. ZINDER: That is almost a common request, a request subscribed to not only in the case of an area. They say they cannot serve outside of that area nor can they serve any customers served by the power companies or within a certain distance of the power company's lines. They are apparently afraid that these cooperatives will take all of their business. On the other hand, if these cooperatives will not pay, the business will fall into their laps. It has been a little bit difficult to get that out of the wholesale contract. Unfortunately, I have to admit that we have not been able to take it out entirely. When I say we have not taken it out, I mean this. We have had to accept contracts because the projects were all ready to go and could not be held any longer and there seemed to be no solution.

We constantly reduce this factor and I hope we shall be able to completely eliminate it. We have done this: If the power company asked for protection against the cooperative, we felt that the cooperative should have the same protection against the power company, so that now we have the clause working both ways -- the power company agrees to serve

the cooperative if the cooperative agrees not to serve any customers of the power company, or any people who might be customers along its lines. The thing goes back to the Act itself which states that loans can be made only for rendering service to customers not now served. According to that Act, it is hard to say that it shall not be in there because we have said it. We are now to the point where it is a dual provision and works both ways. We hope we shall be able to get it out entirely. This is a long drawn out fight.

MR. PYLES: Mr. Zinder, that does not mean that you are including or will include territorial assignment of the country?

THE CHAIRMAN: The Act does not provide that.

Q. In Colorado for instance, they will not assign territory and keep the cooperatives out of that territory although they had no lines and no intention of doing that.

THE CHAIRMAN: Did we sign such a contract?

A. No, we have this dual provision in there.

MR. ZINDER: We try to watch them and give them all that protection. The only territorial restriction that you find sometimes in these contracts of the nature that you have referred to is when the power company will say that the cooperative cannot serve within the city limits or in any city which it might serve retail. That is prohibited by the Act anyway. It specified rural territory.

MR. PYLES: You see my point. They want a whole territory cut out.

THE CHAIRMAN: As a matter of fact, it is contrary to public policy. We have no right whatsoever. We have no right to even indicate that we have authority to give them territory.

MR. BACON: Mr. Zinder, there is a peculiar thing that the public seems to fail to understand, I refer to the regulatory control that the various public service commissions have. I think a number of our own personnel fail to understand the handicap under which we work in some States. For instance, in one State, it was held to be particularly essential that the power company deliver current because somebody asked for it and they had to make the connection three weeks after we started a cooperative in that area. Now,

that application had been made five years before, Mr. Carmody heard a man state; but as soon as we went there, they had to be connected right away. Now, in another State, the Public Service Commission could not change rates in less than three months, they said. I negotiated a contract for 600 homes in that area; this time they had to have three months. We went into the same State this past month and they made a change in the contract -- I think we were under way three days before the Public Service Commission acted in that State, granting this company an opportunity to lower its rate to a rural area which it has served. They could not do that before. I think that our organization should know these things so that they can understand the handicaps that we face and why it is not always possible to do just exactly what we should like to do.

MR. LONG: In connection with the difficulties that Mr. Zinder has had in procuring low wholesale rates, I can well appreciate the difficulty of securing municipal plants. I cite, for example, one instance in Austin, Minnesota. I was privileged to be with Mr. Zinder at that time. The officials of the municipal light plant including the superintendent were very anxious to cooperate with REA on a low wholesale rate. We heard that there was a meeting at Austin. We attended a mass meeting of between 1,000 and 1,500 citizens of Austin gathered to protest against the City Council and superintendent's selling current outside of the city limits at all. That meeting was called at the suggestion of an attorney who had previously been with a private utility company. Mr. Zinder and I were on the spot. I do not know how we persuaded them but we got a split vote and the Council was directed to sell current to the farmers. We pointed out the factor, Mr. Carmody, which you pointed out -- that the towns would not be worth the foundations upon which they were built if it were not for the money secured from the farming community around them.

I bring this up only to illustrate the effect of this insidious propaganda, even sent into the city itself, to prevent the territory from being served so the power company can charge a rate which they, themselves, can set and dictate. The only answer is the thing I have brought up this morning before recess, that this is exactly what we are doing in Iowa and that some temporary generating equipment will keep the rates down where they belong. A wholesale rate of 1-1/2 cents or less per kwh is the rate for an average well-operated generating plant because there is only one meter that has to be served. The answer, as Mr. Lake said originally, is that temporary generating equipment be sent in to

serve these lines and energize them while the rate negotiations are going on.

THE CHAIRMAN: Perhaps the most marvelous thing in the world is the patience of the people at large and the patience of the United States Government with many of these individuals. There are so many people who have not spoken at all. Let us hear from someone who has not spoken. Mr. Roewe is not known at all. Mr. Swanson --

MR. SWANSON: Mr. Roewe's position is comparable to the position of Mr. Gundershaug. He is an engineer of long experience.

MR. ROEWE: There are two or three matters I should like to mention. Each place I go, after the project is partially started and under construction, the engineer seems to be in a haze and he does not know whether he is supposed to make the contract for power or not.

THE CHAIRMAN: You mean the project?

MR. ROEWE: Yes, he is under the impression that he is supposed to look after the power rate and the lawyer says he is supposed to look after it. I am not interested in the details but I have a general or broad interest in this matter and I should like to have some degree of understanding as to who is supposed to handle the rate matter. The next question is, why do we wait until the project is absolutely completed before we start negotiating rates? I know of a case in South Carolina and also one in Ohio where the power company held up the service on the project about two or three weeks. In South Carolina the power company was ordered to make the connection. They still do not have a rate, so I understand.

Another question is, who decides whether these power rates are good, bad or indifferent? The Georgia Power Company says if you want three-phase power, it will cost twenty percent more than single-phase. I worked with the engineer on that matter and we found that if we want the three-phase power, we could reduce our construction costs eighteen percent, roughly speaking. But the power cost increased twenty percent with the result that it proved to be better to use single-phase power rather than three-phase power. Who can answer those questions?

MR. ZINDER: In answer to the question who should negotiate the rate -- whether it should be the project engineer, the

project attorney or the sponsor -- let me put it this way: We like to do that ourselves, or very specifically, we like to have it done under our direction. If a municipal plant is involved, the field men are negotiating that rate or contacting the municipal utility right from the start. If a private utility is involved, the Rate Section wants to know about it because we have other negotiations with it or a sister company, or it may be a matter that we might want to approach from the top rather than proceed from the bottom up. We have project engineers go into the question of negotiation of rates and wholesale rates as early as possible. We try then to handle the thing from this end. We should like to have no negotiations on their part unless specifically requested from this end to do some specific task. We may call upon them to get a quotation or to discuss some provision in the contract of an engineering nature, such as, who shall own the substation, voltage regulator, power factor or whatever it might be.

In South Carolina, that wholesale rate negotiation was started months and months ago. It started even before the commission issued an order directing all utilities in that State to file a specific rate which averaged about one cent per kwh. That case went into the courts. Three of the companies faced the State Authority down there on the question of whether they were connected and whether the contract was signed at all. There must have been just one company that did not connect, that held up the project several weeks. We had trouble with that same company in North Carolina. The field man starts rate negotiations as soon as we have the necessary information.

Q. Whom do you mean, the chief engineer?

A. The project engineer.

Q. And you say he starts negotiations right away?

A. With the field men.

Q. You mean the sponsors of the cooperative.

THE CHAIRMAN: These men call here.

MR. ROEWE: That is exactly the situation in Georgia. We shall be specific. We shall refer to Georgia-42-Toombs where there is a three-phase line. I think the project engineer should decide the exact location of the meter.

MR. ZINDER: May I make this statement? When I say start negotiations, I mean this: We just try to obtain satisfactory rates and rate schedules, and then clarify the terms and conditions surrounding the rates, whether the three-phase or single-phase will apply to the 66,000 volt lines or to the 2,300 volt lines and such matters as that. We also try to get a satisfactory rate schedule. In that Georgia situation, we recognized the problem of three-phase and single-phase there, and recently we wrote the company that we wanted to have that modified. The company replied they would and that if they did not agree with what we wanted, they would come up and discuss it -- I am expecting them any day.

THE CHAIRMAN: I am glad that Mr. Roewe raised those questions because they indicate the very great difficulty of effecting perfect, nearly perfect or even practical coordination of our activities.

The development man in the beginning, say in a week or so, undertakes to do as much as he can. He, with some of the responsible sponsors of the project as Mr. Falkenwald has pointed out, goes to the course of power for rate information and begins negotiations. Obviously, negotiations cannot be concluded there. They must be concluded at a later date, perhaps in Washington.

Now, men like you and other men in the field not concerned with the engineering problems, are interested in some phase of this and can help with the problem. The question is, where can the situation be grasped? Certainly not at the wrong place or by not knowing where the problem now lies. Coordination must be effected through some particular section, Mr. Zinder, so, irrespective of who is participating in the bargaining, whether it be a development man or sponsor and a little later a project engineer, a lawyer, or both, or the Chairman of the Board of Directors as sometimes happens, in fact whoever handles it here, ought to know the full situation; and there should not go from our offices letters from two or three different sources to three or four different people in the field. There should be one clearing place for rate information. If the lawyer is handling it, everybody on the project ought to know that he is handling it and all of the rate correspondence should be handled through him and proceed in the regular way. Similarly here, instead of scattering the handling of the question promiscuously among individuals, a specific person, familiar with its history up to the time he takes hold of it, should carry it on.

This question of coordination applies to every other relationship and I hope that the most useful thing that will come out of this discussion will be a clear understanding on our part of how best to effect that coordination on the job and inside. As a matter of fact, there are a good many of our people who, because of their particular relationships to some of the borrowers, sponsors, directors, managers and what not, have left a good impression, likewise there are others within the organization who have not left a very good impression. Obviously, we cannot deal justly and fairly with people if the latter continues.

I am glad that you raised that question. It should be raised at many stages in relation to these people. I repeat again that when we have an average of twenty people in the field all of the time, traveling in practically every State in the United States, having relationships with hundreds, even thousands of individuals, who are dealing with REA or want to deal with it, we must take advantage of everthing that is known about all of these situations, either by ultilizing that information or rejecting it. We should not allow it to hang fire and should not ignore it. I say to you, there is not one person who has not thought about this coordination, not only here but elsewhere over a long period of years, because it is an extremely difficult job and requires not only the highest degree of intelligence and understanding but the closest personal relationship between all of the divisions. I suspect every agency has the problem but we have it quite sharply and because of the large number of people who expect service from us we cannot do our job if each division persists in going alone as if there were no others.

MR. ZINDER: Perhaps I really overlooked a clear answer to your question and that was this: We do have what I feel is a good coordination on the question of wholesale contracts because as Mr. Swanson and others will tell you, any time I get a contract, whether in the preliminary stage or not, I review it. It goes to engineering and then to Mr. Gilbert in the Legal Division; in some cases we correspond further and get each others views. I then send it to engineering again -- that applies when the question of three-phase or single-phase is raised. If the reply made by all three in that manner, is apparently the best conclusion we can get, then the contract is sent to Mr. Herring and Mr. Nicholson before it is finally sent to the Administrator for his approval. That is the mechanics of it. In the first

place, that is getting the rate in and getting the first contract, we have close cooperation with the Development Division, particularly in regard to the municipals and privates, for we have to depend on them and the original source in the specific areas.

MR. PYLES: Is it not true that in this particular case, the development people had nothing to do with it?

MR. ZINDER: No, not that I recall. It was one of the first rate contracts submitted.

THE CHAIRMAN: I do not even know myself. I think as these problems arise, I must become informed about them. I do not know how the projects we are now working on have been developed. I have heard there was a great deal of development before we had a Development Section. I do not know whether it was done by one group or one set of people. I do not know where development starts. Perhaps we shall have to make an investigation of that sometime because these are peculiar problems. Sometimes we blame people for what they had nothing to do with. Does anyone have a question?

(Question not heard with regard to generating plants.)

Mr. Swanson is going to discuss generating plants as a part of his talk. Why not raise your question at that time. That is a long discussion.

Does anybody else have a question?

MR. LAKE: I should like to ask one question. I just want to know how often we encounter the condition of having to supply the primary transformers?

MR. ZINDER: As I recall, that is quite common at the present time in the power contracts. It is wholesale power services and as such is supplied at the primary site with the project providing for the transformers. Where it is contemplated that a project is going to be broken up into a number of parts, that becomes an appreciable cost item and where there is a project of about 800 miles, or something of that nature, and one point of contact, it is not an appreciable item although it is a factor which may be taken into account. My only answer is this, that in most cases the project supplies the transformers.

MR. LAKE: We could have built a temporary plant and in that case, what would those transformers have cost us?

THE CHAIRMAN: Mr. Lake, how much do you think they will cost?

MR. LAKE: About $10,000.

THE CHAIRMAN: Who else has a question or a comment?

MR. RAMSAY: I do not want to discourage anyone who might participate, from talking. The participation has been very limited.

I should like to emphasize the point you made about the importance of this wholesale rate question. It is plainly a vital one and anybody who looks at it knows that we are going to have to reckon with it very soon. We are going to get it first in connection with the projects. A lot of people have asked whether they are going to pay out, and the level of wholesale rates will help to determine that. A further consideration comes very close to my immediate interests. It is this: Thus far, to my knowledge, nobody has raised any question about what our projects are charging the farmer for electricity. That will not last. One reason it has not happened is that we are in the early stages of this program and the public is thinking about the need for rural electrification. When these questions are asked how are we going to answer them? The fellow not being served or who is interested otherwise will say, what about those rates of yours? Merely because we are a governmental agency, we are in no sense a sacred cow! We shall probably take more punishment on that account, in the long run. They will come at us with that question, and we are going to have to watch our retail rates in order to safeguard our position with the public. The retail rates will depend upon the price we get on the wholesale power.

THE CHAIRMAN: You are perfectly right. It is a tremendously important question. In my own State of New York for a period of thirty years, there has been a struggle for social legislation -- one administration passes it and the next one refuses to appropriate funds to carry it on. That is a well-known method in my State for halting effective legislation. The same thing can apply. The very people who have told me personally that these projects will not pay out, and that they will be back in our laps, have quoted rates that are excessive and have admitted this point because rates have been reduced after long negotiations. It is a thing we have to recognize. I like to deal with realities. I used to read fairy stories. I have not read one in a long time. There is too much going on in the world not to be a realist these days.

MR. ALLEN MOORE: I am a Missouri farmer and also a member of the Legal Division. I was out in Lincoln, Nebraska, recently and attended the first meeting of the State Association of Rural Public Power Districts. I think an experiment is going on there which is going to point the way toward a solution of the power question. In Nebraska you know, there are publicly owned plants, great power projects which are being financed and being constructed with Federal funds. During the course of the meeting, the presiding officer said to some of the representatives of these projects, "At what rate will you be able to supply wholesale power to a rural district?" The answer usually was seven or eight mills per kwh.

The Nebraska experiment is similar to the program which is being carried on in Ontario and New Zealand. Ultimately I think we shall see a widespread development of power districts, not as a whole proposition, but as a yardstick through TVA and other sources of power such as they have there. My contacts take me to Government officials, public service commissions, legislatures and others so I have a fine opportunity to learn what the public thinks of REA. I bring this comment as a little note of encouragement and heartening for REA. A dinner was held at Lincoln, Nebraska, that night with about seventy-five representatives of this rural power district present. There were also present at the meeting about twenty-five senators out of the forty-one members of the unicameral legislature of Nebraska. At the conclusion of the meeting, there was adopted unanimously a vote of thanks for the splendid cooperation which REA has given to the rural power districts in Nebraska.

THE CHAIRMAN: Thank you, that is fine.

Did you have a question on this rate business, Mr. Lewis?

MR. LEWIS: We have been discussing wholesale rates. I was very much interested in knowing what the attitude is in determining retail rates, and whether any consideration will be given to the current rates as charged by the utilities at the present time. They may be probably a little lower. In some of the States, the retail rates are fairly low. Then they may be a little lower than the rate would show on our project. Would you consider the utility rates or would you consider a rate schedule higher than the utilities are charging?

THE CHAIRMAN: You rate experts, what suggestion have you to offer?

MR. ZINDER: We are on the spot.

THE CHAIRMAN: Let me ask Mr. Herring.

MR. HERRING: There is only one thing to do and that is to charge a higher rate. If the project will not pay out, a higher rate must be paid. I do not know whether you are going to run into a condition of that kind. I personally do not know of any situation where our rate is going to be higher than the utility rate. There may be places where our minimum rate is higher and should be higher than the utility rate but I think as a general rule, basing everything on the cost of the first 100 kwh, that such conditions do not exist.

THE CHAIRMAN: Do you know, Mr. Lewis?

MR. LEWIS: I fear you run into that in Wisconsin, Michigan, Arkansas and Kansas -- those four States.

THE CHAIRMAN: Then those are the four States where you are likely to run into it.

MR. LEWIS: Then we come to this theory, can we raise it by raising the rates?

MR. HERRING: Let us have the specific case?

THE CHAIRMAN: Let Mr. Herring take a look at those four States. He does not know offhand of any difficulty. Then we come back to merchandising. Henry Ford did not sell more cars by raising the price.

MR. HERRING: There is another question involved. If the rate on the project is too high, higher than the utility rate, then the project is probably not a feasible one.

MR. ZINDER: I am just thinking of an area surrounded by the Consumers' Power Company where the cost of 100 kwh is $3.30.

THE CHAIRMAN: That is the first thing that is going to happen.

MR. FALKENWALD: Those farmers in the area are not so much

interested in the rate per kwh as they are in getting electric service even within the range of fifty cents or more. They will not stand on that if they get the service.

THE CHAIRMAN: We have to deal with it now.

MR. BRAY: Is it not true that patronage refunds will take care of some of the deficiencies there?

THE CHAIRMAN: If there be any. It is going to be some time before they will amount to very much on anything we have seen so far, but the objective is to have them sufficiently large.

Mr. Nicholson has asked for just give minutes. He says it will be in lieu of his place on the program. We shall lose no time in giving you the floor.

MR. NICHOLSON: Mr. Carmody and I agreed in view of the fullness of the program, that the special assignment to me for this morning ought to be eliminated.

In lieu of that, I want to express on behalf of the Legal Division a covenant with REA and with all of you, most of you being in other divisions. I think I can make this covenant on behalf of my colleagues and so far as I know, what I am about to say, very simply, will represent the attitude of every one of them. The covenant I want to make for the Legal Division is one of complete loyalty to the Administration and to the Administrator and to all of his decisions; a covenant also of respect for all those in the other divisions -- respect for your loyalty, your integrity and your honest attempt at a solution to our problems. This involves merely a little elaboration of the statement I made yesterday about the tension that exists or ought to exist in the organization. As long as that tension is represented by a constructive interchange of ideas and interplay of personalities, that is fine. Equally important, however, with the question of the ideas that are interchanged is the way in which they are interchanged. When this tension that can be and ought to be wholesome in an organization begins to be destructive and lacking in mutual respect, it jeopardizes the relationship that I am sure all of us agree ought to exist. Now, this is a difficult thing. It is difficult in all of our relationships -- domestic, professional and what not. It is more difficult for attorneys than for most of you because in our private practice, many of us spend most of our time in intense partisanship. Some of us have had to readjust our customary approach to problems and

to relationships in an agency where we have little to do with litigation.

I was asked to talk today on the "high-lights of REA legal work" but there is one thing in which I am more interested than a high level of legal efficiency. That is a high level of morale in our common undertaking. I should like to see REA make a record in Government activity for a closely knit performance in which constructive differences of opinion are welded together by mutual respect. So far as my colleagues can contribute to that end I shall be more proud of their accomplishment than I would be, and am, of the high level of their legal work. In the pressure of things many of us will fall short, but I hope that the word "Cooperation" which predominates in our loans will also predominate in the spirit of our own endeavor.

THE CHAIRMAN: If it were not for the very real battle that the utilities have made to prevent the Government from doing a job it has to do, there would not be this internal strife. This comes from the particular character of the fight and the different approaches that have been made to that fight. Gradually, we are growing to understand that there is a united front in REA, to move the program forward, even if we have to push aside some of the sacred cows and dead cats of the utilities. It is going along in different ways but the program is advancing and we are all working in that direction. But on the whole, in referring to his interest in having an engineer on the right character on the project in Minnesota, I said to Mr. Gundershaug, "We are interested." He said, "I am vitally interested. I know these Minnesotans. I have been out there." I said, "You are not more vitally interested than every representative of REA and when you go out in the field, each of you, no matter how vitally interested you are in the problem, you are no more vitally interested than we are here at home. We may not get the fight you do. If the thing you are vitally interested in is the right thing, we will be vitally interested in it too, Mr. Gundershaug and Mr. Jones."

Tomorrow, Mr. Swanson, may we begin with your paper? We shall not neglect the end of the program. Everybody has said the end would suffer. We shall begin at the end and go back. We now stand adjourned until tomorrow morning.

(ADJOURNMENT 1:00)

Washington, D. C.
February 4, 1937.

The fourth session of the Administrative General Staff Conference of the Rural Electrification Administration was called to order 9:00 a. m., Thursday, February 4, 1937, by the Honorable John M. Carmody, Deputy Administrator, Chairman.

THE CHAIRMAN: We shall now hear from Mr. Swanson on development of generating plants.

MR. SWANSON: Mr. Carmody, the subject this morning is "When, Where and How to Allot for and Build Generating Plants". In Mr. Zinder's talk yesterday he discussed at some length the problem of rates. I presume that, in a measure, answers when you should build a generating plant. I might say that first the chances are that you would build a generating plant when the rate that had been offered you by some other supply was not the right rate, or again, if there was no power supply available at all.

I do want to make two or three points in connection with that, and I hope you will not consider it as more or less repetition, but it does happen that oftentimes the rate that is offered, say by the power company or the municipality that is nearest to the project, may appear on the surface to be a low and reasonable rate, and yet when you take that power and convey it into the center of the load it may not be the same rate at all. You appreciate that that is because you have added to it the amortization, carrying charges, and loss in getting the power over into the center of the load.

Let me put a few pictures on the blackboard here. I think to develop my point on that I should show at least one or two projects that have come to us that probably bring out our point a little more clearly. In order to emphasize our point I may have to add a little bit to the situation.

I want to show you first an area like this (indicating). For instance, we can take a barrier which we could

say in this case is a river, and it so happens that a power supply is located over at that point. The development, of course, covers an area of counties, something like this, we can say (drawing on blackboard). I believe there was also some area below here.

In first considering the project it seems they found the load beginning from this point and running out that way, but when the project comes to us from the engineer for the sponsor, we find that the bulk of the load is centered out in this area here. Therefore, we get a cross-hatching of lines there (indicating) with a little leaning over into this next county, with this tapering off to a lesser load out to the center of supply.

The question before us is, when should we build a generating plant. I think that the rate over at this point was around 1.1 cents per kwh, or something like that. We can just take that as a point for the moment. Of course, in bringing the power from here over into near the center of the load, a rather heavy transmission line would be necessary. Obviously, the cost and amortization of that and the losses on the line must be added to this rate down here, which would bring that rate up in the vicinity of two cents per kwh, according to the figures that we made on this particular project.

The question with which we come back to the Rate Section then is to check our figures and find out if the calculations that we have made are correct; and in case -- I may have to change the situation somewhat to illustrate my point -- we find that the rate at that point up there would be 2.1 instead of 1.1, that is a wholly different picture than it was, assuming it may have been considered for allotment. So the question now is, is not this the time and the place to consider a generating plant? That, of course, is passed on to the administrators for their decision.

I just wanted to show you that, as a problem which will answer in a measure, "When should we build a generating plant?"

Now, I should like to show you another point. Supposing we have a development, a series of counties, we can just spot them on here more or less in the form of squares (drawing on blackboard). It does not happen to be like that, but it will do. In the development of a group

similar to that, of course, these things do not necessarily follow in proper sequence. Oftentimes they may start here and skip there, (indicating), and just sort of jump around wherever the demand may originate.

It so happens that out in Iowa we were presented with a series of counties, whose engineering problems we were to consider. We found that, first, the power supply that was available was not fully adequate, moreover, there was some uncertainty as to the availability of it at all. The question came up of putting in a power plant. Quite naturally you would assume that the thing to do was to put a plant somewhere in the center and radiate from that, but in this particular instance it so happens that the power plant located in the center would be unable to deliver power over to the farther limits east and west without assuming excessive loss. So in considering the problem we more or less concluded the thing to do was to get within economical distribution limits by locating a plant, say, there (indicating) and another plant somewhere over there (indicating), and then radiating from there out to the load.

There is the question again, "When should we build a generating plant?" In that case we say that there is an ideal opportunity to put in two generating plants, not just one, because the losses and amortization expense on two plants, you will find, would still be less than on one larger plant located in the center. That is really when you should build a generating plant.

Now, I want to go into the problem that when you consider building a generating plant you are getting into something that is exceptionally technical. There are not many engineers in the country who have had a great deal of experience in designing and building generating plants. It is more or less a specialized field. You can waste a tremendous amount of money and run up expense very rapidly unless you surround yourself with competent engineering help. I am very sincere about that. We find that a good many of the engineers that come in contact with us are wholly incompetent when we come to generating plants and are more or less influenced by the manufacturers themselves. There is a great deal of difference between engineering and sales engineering.

I am purposely refraining from the use of the word "Diesel". In my small group down there I object to the word very much, because I think that is something that

people are beginning to accept as a generating plant and the only answer for a generating plant. It is not always the answer for a generating plant. I have noticed it has been referred to in these sessions, and I think it is really a mistake to refer to it always that way. You should, of course, just ask that consideration be given to a generating plant, and not always think that the answer is a Diesel plant, because Diesel is only one of many methods of generating power.

The cost of generating power by a Diesel plant is not always the cheapest. It depends on the availability of other fuels and, of course, on the cost of installation. The question is, How small a generating plant could you economically install? First, that will be controlled somewhat by which particular plant you propose to build. Naturally, you can install an oil plant in smaller capacities and operate it more efficiently than you can install and operate a steam plant. But I hope we shall not lose sight of the possibility of steam engines, or even steam turbines, when we come to the larger sizes, and of the coal or other fuel for producing the steam.

I note a great deal of attention has been given lately to the matter of oil engines, and particularly to Diesel. There have been a great number of changes and improvements made, but it has a long way to go yet when you get down to the smaller plants.

I should like to say -- and this is my opinion; I do not think I am wholly supported by our engineering group on it -- that when you get down below 400 kilowatts demand, you are getting, probably, a bit too small for a generating plant. You should dig around pretty carefully in locating some other available supply, particularly from some company or municipality, or else enlarge the project.

I think oftentimes it is perfectly all right to say that if we cannot get a power supply, we will put in a power plant. There is no harm in it at all, and it does keep the project together and does give you a chance to enlarge it. Oftentimes, it acts as the wedge or bargaining point in getting a better rate.

A great deal of attention has been given to the cost of installing a generating plant. Inasmuch as there are many factors that enter into that, it is going to be difficult even to venture a guess as to what it may cost,

but I know you are expecting me to say something about that and I am just going to say this, that it is safe enough, assuming that conditions are equal, to say that you can pay anywhere from $100 to $125 per kilowatt installed. That would include buildings and switching equipment such as you would normally have. I say between those two figures is about right; maybe if you multiply by $115, you are not getting very far off. That is going to vary when you get into the larger steam plants; it is going to come down. When you get into the larger steam engine plants it is going to come down again.

There is one thing I want to go back to for a moment, and that is, when you come to putting in a power supply you want to make certain that you do not figure on that plant being too large and covering too much area, because there are operating limits to which that plant can go, to the point where it gets away from rural electrification and goes into high line construction and high line operation.

In locating a site for the generating plant, it is well for you men that are in the field to bear in mind that it is advisable that the plant be located, first, on a railroad siding, and secondly, on or near a river where a water supply can be had readily at a reasonable cost. You must remember that if you have to build railroad sidings from the main line into the plant, that this expense must be included, and that if you are located a distance from a river or water supply you have to pipe it in; or, if you are not on a water supply, it necessitates the drilling of wells. All of these additional expenses, if incurred, must be added in. So it is just as well when you say that, "This particular farm is 'okay' for use for the generating plant", to look around for the river and the railroad.

There is a big problem involved in the operation of the generating plant. It is not a toy; it is a very highly mechanized piece of equipment. It has to be properly installed and well taken care of. I certainly hope that when we get to the point when we install some generating plants we shall all be careful in selecting the operators of these plants, because, obviously, the gentleman who has charge of that plant must be a trained and skilled engineer, preferably one who has had experience in the operation of that particular kind of plant, meaning that you cannot walk a steam-man into an oil plant or vice versa and expect him to produce best results immediately. At least, it is not a job for this Ford mechanic that we heard so much about,

who is always available in the area and has the answers to all the problems. He is not the kind of man that you want to put in these generating plants, because he can do a tremendous amount of damage and he can run up a tremendous amount of expense if he has not been trained in the operation of one of these plants.

Another thing I should like to say, too, is that in selecting the size of the plant, it is perfectly all right to be optimistic and to talk big figures and say that this is the real answer, and all that, but you want to bear in mind that the generating plant has to grow with the load. That, of course, is a decided advantage in favor of generating plants as against the purchase of power. You can build your buildings large enough and provide your switching facilities and water and oil facilities, for instance, large enough to take care of additional units to be installed later on.

We have developed in the Engineering Section a series of sketches showing some different sized buildings that may be used, and providing in their foundations for possible three units, starting off with probably two to begin with and increasing to a third unit later on.

That does give us flexibility that is very helpful. I know in discussing the matter of rates with the Rate Section we always have to be careful that we do not over-build when we are considering the project, we have to keep at least within the first two or three years, knowing that as the project grows we can easily and without a great deal of expense enlarge the plant.

When we come to consider generating plants we are going to be faced with this problem of salesmanship. I know that the various Diesel manufacturers have all sorts of dollar-down and dollar-a-week propositions to offer; when they come to them you want to keep your fingers crossed. There is nothing cheap about their proposition at all. They really do not have anything more to offer than other manufacturers, so far as that is concerned. As a matter of fact, I think you will find that when you go into that question of financing, all of the Diesel manufacturers will bid practically the same. The only way to get advantage of the prices that they offer is to include in your specifications enough switching equipment and other gadgets so that they can keep throwing in more and more. They have brought their prices together pretty well. In talking with a gentleman from the West the other day, he was telling me that the last proposals that he has seen were almost dollar-for-dollar alike.

I want to enlarge a moment on the point that was made yesterday by Mr. Wood. I think it is a very important point, and to my mind it is also a very disappointing feature of our whole program. That is, the failure, in my opinion, of the municipalities to come through. I think Mr. Wood has given us the answer, but I think that is not the answer that we should accept. I think it is going to mean that some day we are going to have to go out to one, or two, or a dozen of these municipal plants and, doing it in a friendly way, and as nicely as we can, try to show them and their citizens, if necessary, what their actual costs are.

I feel that the municipalities could have been of much more help to us if they recognized this load as their load and would stop thinking that they were confined within their own corporate limits.

I have felt very keenly about that for some time, long before I came with the REA. I think Mr. Falkenwald and I had an early experience on that up in New York State on what I believe was the first trip that both Mr. Falkenwald and I made. We actually got into a city, a sizeable little town, with an ideal generating plant and a nice group of folks operating it. I had known them for years. We talked long and hard with them about getting them to help us, and about their furnishing power to the rural areas. But they had no interest whatsoever in what the farmers did outside. They were interested only in piling up profits so that they, the operators, could use these profits to reduce their taxes. I think that was an eye-opener to both Mr. Falkenwald and me.

In passing, I also want to make this observation: I am afraid we are inclined to get a little bit away from rural electrification at times. I am afraid that we are beginning to talk something that really is not within our province; that is, we are stringing our projects out and necessitating the installation of entirely too much heavy construction, which is putting us pretty close to that thousand dollar line which we promised the Administrator we were going to get under. We have to get back to rural electrification.

The part generating plants play in that is very, very important. A generating plant properly installed, properly located, and with the proper equipment, can beat any rate that I have seen that has been offered by any of the private companies, and I am almost willing to say -- by any of the municipal groups that have come to my attention.

There is only one advantage to a power supply offered by private power companies, and that is this: They have lines that radiate through large sections of our projects, and we can tap onto their lines at many points, and this does reduce the cost of construction by not requiring the installation of heavier tie lines, though it does give us a non-integrated project.

I am very anxious to see the time when we can actually put in a generating plant, and I think we in the Engineering Section are going to be quite jealous of that opportunity, and we are going to be very insistent that we do not get off on a tangent on the first plant. To do that, we are going to ask that we be permitted to select the engineer who will have charge of the installation, and we shall ask also that we be permitted to place a man on the job, knowing, that we have gentlemen in our section, like Mr. Wood, who have had a great deal of experience in the installation of Diesel plants, and knowing that we can save much in the cost of installation by being right on the job and seeing just what is being done all the time.

When you come to install a generating plant in the North as against the South, you have a different set of factors, and a different set of costs. I know the folks in the South are inclined to want to house their equipment in metal buildings. That has been put up to us by our friends down in Texas. We are not in agreement with this. We believe in erecting something that is a bit more permanent. There is nothing so simple about putting in a generating plant, with all due respect to the comments that were made yesterday about putting equipment on wheels and toting it around. It may be an answer for small capacities, but it is not the way to do it. I think the answer is a more substantial one.

We at present have one set of plans and specifications for a generating plant in the office, and we have an engineer and an attorney out in Iowa now working up the details in connection with the two plants we are proposing to install out there. The other plants that have been up for consideration have more or less sloughed off to the sidelines. I presume, Mr. Carmody, that I should ask if there are any questions at the moment.

THE CHAIRMAN: Let us put it this way, Mr. Swanson:

The Administrator has come in and he has other appointments, and he would like to get through as soon as he can. Suppose we let the discussion go over until he has finished; then we will go through with the utilization a little bit, and then we will get back on this discussion. I thank you very much for your talk. It was excellent. (Applause).

If we were not behind in our program, this day would be devoted entirely to discussion of load building, utilization, education, and those things that go with that part of the program. We may have to take a little time later in the day to discuss Mr. Swanson's paper. For the moment, the Administrator will start the discussion on load building. Mr. Administrator.

MR. COOKE: I always try to be frank with this group. Yesterday morning I was truthful in telling you that I was delayed because of the necessity of dictating a memorandum to Miss McKim. This morning I was delayed because my hotel, for the first time since I have lived there, failed to call me. So if you could look inside my mind you would know that I felt exactly as I did -- I am not going to tell you how many years ago -- when I used to bolt for the door of the chapel tying my necktie as I went, as I did in my college days.

In the summer of 1933 I was talking to a lady at Fisher's Island. We were down on the bathing beach. She observed that if there were more people in this country that could not find work, she did not know why they did not take them out to sea and drown them; otherwise, she and her people and others like them would have to pay taxes to carry these people along.

You might call that the "cats" theory of holding down the population, because it is what everybody does when they have too many kittens in a litter.

If you approach social problems from any such angle as that, then any discussions of load building for rural areas is superfluous. You had better not waste your time on it. But if you believe that life in the country can and must be made at least comparable to life in the cities, and I should say, made very much more desirable than life in the cities, then it is worth while to give some attention to this problem.

I liked one remark -- more than one, of course, but this one in particular -- of Mr. Swanson's, especially where he said, "We have our answer but we are not going to take it."

There are so many problems before this Government and our society today which are difficult to the point of being insoluble. I believe that men and women are all in the same position -- that is, if you believe the "nine old men" on the other end of Pennsylvania Avenue, because a woman now cannot be given citizenship unless she guarantees to bear arms -- we are in the position of a nation going to war. These are peace-time problems, but we do not want to have anything to do with anybody who runs away from the difficulties of war, enlistment and all the rest of it.

I think that we men and women have to make up our minds that if we are going to be the type of citizen this Government needs today we must certainly shy off from the easy problem and tackle the difficult ones. I do not know of any problem that seems on the surface more insoluble than building load for our rural lines. But we have put our hand to the plow and we are going through, with your aid and the aid of many other people that are interested in it with us.

Do not let anybody fool you about the statistics that come in. Believe all REA statistics, of course, but as to statistics coming from any other source, just take them with a grain of salt.

For two or three years, now, in connection with our own work and in connection with the World Power Conference, we have tried to get some definitions, we have tried to get some dependable statistics in regard to the rural service.

We have tried to get them from the Federal Power Commission, the ancient and honorable Edison Electric Institute, formerly the National Electric Light Association, the Federal Central Statistical Board, and various other savants, and I have given it up; I shall just put a part or all of my tongue in my cheek and say that the average rural use is 840 kilowatts a year. It does not mean anything among people who want to talk in scientific terms, but I suppose that is as good an approximation as we can get of the average.

It is probably also true that the normal user of electricity uses about 300 kilowatts a year. We have, frankly, right from the start, in our REA literature said that unless we could learn to use 1,200 kilowatts a year or 100 a month rural electrification on any broad scale was impossible. There is no one answer to that problem, but I need not tell you all that. You have been thinking about it enough yourselves. We have to attack the problem from a great many different avenues of approach.

For me, the master road to building rural loan is to cut the costs. Since 1913 I have been carrying on studies in connection with lawsuits and for various other reasons as to the effect of reducing rates. You cannot point to any logical reduction in the rates that have not led to increased use. It is the invariable rule. I think that I may have told you that within the last few weeks a man who represents large New York investors called on me to make some inquiries, and he said that they were acting on the theory that the reduction of rates in operating electric companies had no terrors for the investors, because invariably when the rates were lowered they made more money, other conditions being unchanged, than they had made before. So

that I think we can take it as an axiom that if you reduce rates the use does go up.

Ever since we started I have tried to impress on this group and the country the fact that we consider the reduction of costs of rendering this service our main function. I really do not care nearly so much how many hundreds of thousands of people are added as I am interested in the rapidity with which we can cut down the cost of the service, because in that way will come a rise in the load.

We are trying several other lines of approach. On Monday afternoon I spoke to a member of the responsible heads at the Department of Agriculture in an effort to get them to take the initiative in picking out a certain number of proving grounds. We had put it up to the private companies, and I am glad to say that five or six of them said, "Yes, we would like to have proving grounds." But I have come to the conclusion that the Government had better move in these matters on their own using the private interests as advisers, because when we had a committee that was to advise us, we found that when anything important came up, each of these five or six gentlemen -- I have forgotten how many there were -- had to go back either to New York or Philadelphia and find out what somebody else thought about it.

So the Government is going to choose a dairying district, one or more, a poultry district, a fruit growing district, and a miscellaneous farming district, located in different parts of the country, and we shall try to get them in the areas of companies with rates already reasonably low. We are going to do something that has never been done before, that is, we are going to try to make the prosperity of these farmers our concern. We will put enough effort in on it, too. If the man is making mistakes in his agricultural methods, if he is growing the wrong crops, or if there is anything we can do to help him make more money not primarily with the idea that he will spend all the money that he makes buying electrical apparatus -- that is the private company's point of view, that if he earns more, one hundred dollars more this year than he did last year, he is going to buy a washing machine -- but with the idea that we want to build them up so as to make these proving grounds not "Happy Valleys" but something approaching them, somewhere people can go to see that the liberal use of electricity harmonizes with the mode of life that seems desirable.

Mr. Ramsay and his colleagues have been working for some time on the implement manufacturers. That, I think, is a very promising line of development in load building. It can be broadly

stated that there are no electrical implements. One of the Vice Presidents of as important a concern as the International Harvester, told me at lunch in Chicago recently, "If a man wants electrical equipment, we put a motor on it." As engineers know, that involves no redesign. It is a substitute. It is making use of electricity in a very moderate and inefficient way.

To show what can be done, is this experience -- and I like to tell this over and over again because it is quite notable: A man named Cable at TVA found that there was no grinder lower than five horsepower. Those who have been following this matter for some time know the reason for that. There was a dollar minimum charge for a five-horsepower motor, and that is a very tidy little minimum to get on one piece of apparatus. But Mr. Cable developed a one-horsepower grinder, then a half-horsepower grinder. Now, I understand he is working a quarter-horsepower grinder.

On the matter of the electric fence that excited so much interest over at Rosedale, the New York Companies called me up on the 'phone quite agitatedly one day and said that people were dying right and left on account of these electric fences; that given a certain moisture in the morning, if a man should forget his overshoes and go out and touch one of these fences he might pass out; in fact, some had passed out. So they were going to have a meeting. They held a meeting -- we had our representative there -- at Cornell University. Curiously enough, they found that electric fences are going up all over New York State. They are very handy, apparently. I am an apple grower as a farmer, so I do not need an electric fence. Perhaps Mr. Fisher, who harbors a saddle horse or two, or a cow, I understand, would know about it.

But at any rate, the companies wanted the electric fence wiped out. They absolutely did not want to have anything to do with it. The Cornell professors, familiar with the history of agriculture, said that that was the attitude the private companies took towards the barbed wire fence when it was suggested, yet it has proved to be a great boon to agriculture. They insisted that we keep the fence and find out how it could be made so that these people would not pass out as rapidly as they had from coming in contact with it.

I do not think that the grinder is a large current user. I do not know just how much current the fence does use. But as I have said before to this group, we are not so much interested in whether an apparatus builds load rapidly as we are in social usefulness. And while the object of this discussion this morning

is load building, we do not want to forget that every time you please the farmer with something that he really wants, even though it does not directly lead to large load building, it is going to make him more keenly alive to the utility of electricity, and therefore it comes into the picture.

We have, up with the National Research Council, a project for organized research in this field. It might surprise you to know that already they are beginning to build in connection with our universities, research laboratories and separate buildings to work on load building, and the use of electricity in agriculture. If we do not watch out they shall get a whole lot of cheap, inefficient buildings, and the professors inside of them probably will duplicate work on the same problem. So that it is quite important for us to find out what is being done in this field in order that we shall avoid duplication, and find out what is not being done.

One of the most moving pamphlets I ever read was a lecture given at Rice Institute in Houston, in 1915, by a great German chemist, Ostwald, in which he pointed out that we human beings are so apt to be like sheep and follow one another that there are fields in which we seem to pour all the money and all the brains, and we find out so much about them that we cannot use all of it — cannot use all that we know; whereas, there are other fields which, for one reason or another, do not capture public interest or the interest of the engineers and the scientists, and nothing is done about them. And as in these fields where we know too much, where great savings are pushed out on a beautiful front, if you get them out too far you get pinched, you get picked off. You had certainly better not push out so far; you had better push out with the line.

As a result of this National Research Council effort we had to get going; we had to find out in the first place what is being done, and then, from such people as Westinghouse, General Electric, and others, that have a big, broad view of the electrical field, we had to find out what is not being done.

There has been a suggestion made to the Utilization Section that interests me. A Miss Manakowski of St. Louis County, representing the Electric Company there, went out and sold electrical appliances, particularly stoves. I think their proposition was, "If you put a stove in, you can connect up to our line." So they all put stoves in and after all were connected up they asked Miss Manakowski what they should do, that they did not want these stoves, that they had coal stoves and oil stoves and what would they do with the electric stove? They had tried to use the electric

stoves and they did not seem to work. Should they just throw them out on the road or put them in the river, or what?

She went to the company and said, "Now, let us hold these stoves. These women do not know how to use them, and I think they can be taught." So she divided these families up into groups of fourteen. She went to their houses -- they were truck growers, most of them -- and got the food, and picked a certain house, and on a certain day she gathered the housewives from these fourteen families and she and her assistant cooked a nice meal on the electric stove. They had a fine party, and the result was that there was not a single stove thrown out. They threw out the oil stoves.

This year she is working in the same way on water systems. She has gone to the company -- she is a county home demonstration agent -- and told them that they ought to put in water systems. The company was very indifferent. I guess she said "Well, if you don't put in water systems I am going to work it that those stoves come out," for at any rate they came across. This winter she and they, between them, are doing a job of putting in water systems.

We are now trying to get Miss Manakowski to come up to Boone County, one of our projects, to see what she with her experience can do to help build up load on that line.

There is a difficulty that we have that private companies do not have. They talk about their 860 average, and that is all right, because it is over their entire area. But we have to have each of our lines show a nice average of 1,200 or thereabouts in order to pay out, so our problem is more difficult. For that reason, I believe we will make more of a contribution to utilization or load-building.

I believe that only if you are up against it or if you have a difficult problem, you really accomplish something; we are going to show the private industry how to accomplish this.

I have tried to paint the picture as a difficult one. I have tried to show you that we are pushing from a number of different angles. I should like to leave with you the thought that each one of you can probably, if you give the matter some thought, make some contribution. I do not mean that you are going to jump us from 850 or whatever it is to 1,200, but that you are going to be able to make some suggestion to our Utilization Section or to the general administration, or some thought that we can put out in the News, something that is going to make your little contribution to this subject a big one.

I never like to leave an audience discouraged about a thing. I want you to know that I glory in the fact that it is a difficult problem. If REA can solve it, you will be entitled to the best in Uncle Sam's House. But it is not as hopeless, perhaps, as most people think, nor quite as difficult as I have tried to paint it.

At a long conference with James Simpson, who was for many years, you know, the head of Marshall Field's and is now chairman of the Board of the former Insull Companies, -- I should not like to say that he has taken Mr. Insull's place, because I have too high a regard for Mr. Simpson, but he is doing Mr. Insull's job in a somewhat different fashion -- we talked about this question of utilization, and he said that he has gone into it. They occupy practically the whole of Northern Illinois, possibly a little better territory than some others, but not an outstanding agricultural district. He assures me that within three years they will have 90 percent of their farms connected, and they will have an average use of 1,500. That gave me a good deal of confidence that we can accomplish as much or even more.

Some kind friend tells me that Doctor Ostwald's pamphlet is entitled "System of the Sciences," and was published by the Rice Institute in 1915. If you want to see a nice study by a very great man as to how problems of this kind are attacked and how you cannot afford "to put all your eggs in one basket", to follow one line, but have to broaden your approach, you look that over.

Mr. Carmody, I guess that is about all I have to say on the subject. I know we will get there.

(Applause.)

THE CHAIRMAN: You have both license and liberty here. You are the judge of what you want to say. Some of us may feel restricted, but certainly not you. You have the ultimate responsibility.

(Discussion off the record.)

MAJOR WERTH: I am a vibrating engineer, that is, vibrating between the Engineering Section and the Development Division.

In discussing Mr. Swanson's very interesting paper, which covers the generality, I should like to contribute a specific example. This is a lake (drawing on blackboard), one

of those lakes that Mr. Swanson said was necessary for the location of a Diesel oil engine plant. Here is a power company. Here is a thin portion of a territory to be served. Here is the thickly settled portion, designated usually by us as the "cream". Here, in the "cream section," we have a fat key farmer -- perhaps he might be represented by Ward Freeman -- an eminent plate passer and mortgage forecloser, who is the president of the Farmers National bank. Then perhaps over here is a thin farmer, Hank Zinder. Hank is over here in this thin territory. He may or may not have a mortgage at Ward's bank. If he does not have one now, he probably will need one a little later.

Here in the thin territory am I. I was graduated from college, two years ago. Russell Cook gave me a job. The president of the college recommended me and Dr. Craig has circulated me for one year -- I shall finish next July -- through all the departments of the REA. So I have been hired by this cooperative for the purpose of being their engineer manager. I am twenty-five years old -- and if you will believe that you will believe anything. Naturally, I want to develop this job, I have already been hired to come out and build this thing; I want to see it going. That is my particular job. On the other hand, the local manager of the Public Utility Company, say Charlie Falkenwald, also wants to sell his juice, and he quite properly, knowing his district, has already circulated over here in the "fat" territory, calling on the farmers, particularly this fat key man here, explaining that the power company is prepared to spend its money to get into it immediately -- that for 55 kilowatt hours, a minimum bill of $3.00 is right in order -- and they are ready to go right now. So the issue is joined. I want to see this whole territory, "skim milk" and "cream" territory served. These particular people -- Charley's -- want to see the "cream" of the business developed. Where am I going to go to buy wholesale juice? Do I have to go to my competitor? Very naturally he is in no particular hurry to quote me, whom he regards as an unnecessary middleman. So what are my alternatives? A distance of 170 miles to the north is a Government generating plant. The Government man here in Washington assures me that sometime there will be juice available from that plant, but not immediately. There is another plant down in this direction, and they have juice there, but it is for an irrigation project, and it will not be available for twenty-four hours a day and for twelve months out of the year. I am not one of those who see eye to eye with the Chief Engineer of the REA, Mr. Swanson, in regard to the temporary plant. I think the temporary plant has its use, and although a Diesel plant if very well built, capable of lasting for the twenty years of our bond issue, could be installed here and

meet the requirements, it would be obsolete when cheap Government power becomes available. It does seem to me that a temporary plant, perhaps using belted generators, with higher speed, weighing less per pound, costing less, possibly driven by gasoline motors costing less and of higher speed would have a lower obsolescence in dollars per year. Those of you who are familiar with city pumping plants no doubt have seen the gasoline engines which are used there for the purpose of doing auxiliary pumping. My plea to you is that you shall bear with me when I, supposedly as a young project engineer located here in the skim milk territory, want to do something constructive and immediate. When you think of these alternative sources from which we can get the juice to the job, do not overlook any of the bets. That cheaper gasoline engine plant with a useful life of four or five years is a factor which deserves consideration. The mobile Diesel plant can be moved to a new and useful location.

Among those questions which Mr. Swanson covered, he covered the "when" and "how", but he did not cover the "ifs". If I have enough strings to my bow, I can call upon this key man in the "cream" territory and say, "Mr. Key Farmer, of course, as far as you are concerned it does not make any difference to you; you are here, you are in this fat territory, therefore, you will get electric service on your farm in any event, either from these people if they build it or from us in the new cooperative if we build it, so that you are in a position to have service either way. But I call on you for your assistance in electrifying this entire project, the "thin" here as well as the "thick" here (indicating). You have a mortgage covering this "thin" man's farm. If he, due to electrification, increases the value $10.00 an acre, the equity which you have in your mortgage is increased. Therefore, as a citizen of the whole county, as a man to whom all these farmers look, I appeal to you as the key man to put this over for the whole county." Then if his answer is "okay", maybe Mr. Swanson will not have to build his oil engine or his movable Diesel engine plant at all.

Thank you.

(Applause.)

THE CHAIRMAN: Is there other discussion? Mr. Herring, do you have a comment or comments?

MR. HERRING: I really think the problem as to when generating plants should be built is largely an economic one. If current

can be obtained from some existing source, whether it is a municipal plant or a private utility, at any price that is comparable, all things considered, with the cost from a proposed generating plant, the answer, to my mind, is to contract for the energy needed, from either the municipal plant or the private utility. If there is too broad a spread in the unit cost of energy as between an existing source of supply and a generating plant, the answer would be to build a generating plant.

Generally speaking, I believe that a minimum of something like 500 customers is necessary to warrant the installation of a generating plant. In other words, this number seems to be the minimum number that is required to get reasonable efficiency at, and a reasonable cost from, a generating plant. With this number, a demand of about 150 kw would be indicated, which would warrant the construction of a reasonably sized plant and, by the same token result in a reasonable unit cost. Of course there are situations when plants must be constructed for materially fewer than this number of customers. In those places where energy is not available from any other source, a generating plant is a necessity. There are, however, remarkably few places where a project of any size could be set up that is not within transmission distance of an existing supply source.

I am inclined to agree with Mr. Swanson in his statement that in a majority of the energy contracts so far executed, the cost of energy is higher than it would have been had we installed our own generating plants.

Another factor which we always have in mind in connection with generating plants is the hazard connected with them. They must be operated by men thoroughly competent and experienced with the type of generating equipment used. If they are not, costs will immediately get out of line. There is with these plants the same possibility that exists with all pieces of heavy equipment, the change for an accident that may entail heavy expense for replacement purposes. If this expense happens to come in the first few years of operation, the cooperative will have no funds to provide for it. In other words, my feeling is that if energy can be purchased from an existing source at a price about equal to that of energy from a new generating plant, or even at a price slightly higher -- and by that I mean a very small difference -- it is better to purchase from the existing source.

I think those are the only comments I have, Mr. Carmody.

MR. WOOD: Mr. Carmody, in reference to the remarks made by Mr. Herring in connection with what Mr. Swanson has said, it

seems to me that it is, as they say, purely an economic question, but I cannot agree, quite, with the statement that 500 customers will justify a plant of any nature except in very exceptional cases.

THE CHAIRMAN: What is the number?

MR. WOOD: I think anywhere from 1,000 to 1,500; probably not less than 1,200 to 1,500 customers ordinarily would justify a plant, except in cases where we have conditions that make the construction of a plant imperative.

Then there is another point that I should like to make, and that is along the line of what we might call public ownership or municipal ownership in cities. Even if the rate approximates what we would have to pay to an independent company or to an independent source we are still gaining something because we are buying something for our customers that they would not get otherwise.

It is true that a central generating plant may not have a life of more than twenty years, but it certainly has a considerable value at the end of twenty years, and they are gaining that much.

Another point is that a central generating plant some time in the future may have a considerable value as standby service when the Government-owned plants become more widespread then they are now. They will have some certain value as standby plants then.

I think those points should be taken into consideration when we are considering the central plants.

THE CHAIRMAN: There is a wide space between 500 and 1,500. Who is going in through that space? Mr. Pyles, you shook your head. Were you ready to make a statement?

MR. PYLES: No, except that I feel in many cases the installation of a plant with 500 customers would be warranted if the cost of the installation of the plant were not too great, and if the price charged for wholesale power at that particular location were not too high.

THE CHAIRMAN: Mr. Wood said it was an economic question.

MR. PYLES: Yes, it is purely an economic question.

THE CHAIRMAN: It is a question of what is economically best then.

Mr. Long?

MR. LONG: Mr. Chairman, in regard to the installation of generating plants, while it is true that the more customers you have the more feasible the installation would be, yet from my experience with plants with which I have been privileged to have any connection, I find many municipal plants in very small towns, for example, like Renwick, Iowa, where the town has not over 150 population, yet the plant is generating electricity and serving 600 customers practically as cheaply as Sioux City or Des Moines.

What constitutes the lowest number? I think that Mr. Herring's statement of 500 would be just as applicable as the statement of 1,500. Many towns and municipalities are very successful in the operation of plants in small sized towns. I do not think that the operation where we get down below 150 kilowatt hours would be feasible because of the heavy overhead expense, engineering salaries, and so on; yet I do think that 500 or possibly even 400 would constitute a minimum that would be a successful number in the operation of a plant.

MR. BACON: I just want to ask a question as to whether or not natural gas can be compared with Diesel for use in a generating plant.

THE CHAIRMAN: Mr. Swanson will answer that. It is a fuel.

MR. SWANSON: Yes, very much so.

I wanted to ask Mr. Long one question. He refers to this municipal plant as having a low rate. You must remember that your load factor in the municipal plant is wholly different from the load factor that will occur in a rural project. Out of the load factor you get your use factor. With the municipal plant, having a daytime load and some industrial loads, you are using power practically all day, and of course, at night, whereas in the rural project you have a load factor of about thirty-five percent or less, not more. So it becomes only a matter of cost of production.

MR. WOOD: Just one more word in regard to Mr. Long's statement: You must remember also that the investment in lines in a town is much less per customer than it is in the rural lines.

THE CHAIRMAN: That is right; they are not exactly comparable.

MR. LONG: In regard to that, I wish to state that the distribution system away from the line must take care of its own operating expense. I am referring only to the operating cost and the generation cost at the switchboard. The outside lines have nothing to do with that any more than they have in town.

MR. WOOD: Except that it costs less per customer.

MR. ROLISON: My experience has been, in connection with small generating units of the type of which Mr. Long speaks, that it is not the fuel oil and the lubricating oil that is so important, but rather it is the labor for operation. In a small town probably the operator is also operating a water plant, and he is probably doing many other things. The city clerk is probably collecting the bills. This plan gives a better and more economical set-up than is obtained by establishing an independent, separate institution to operate an independent organization.

Another point that Mr. Wood made, adding to what he said, is this, that even though these plants are bought and are used for 20 years, there is some value left. There is more than that. I happen to have had some practical experience in this line, in the city of Palo Alto. For a number of years, Palo Alto generated all of its own electricity with Diesel plants. In fact, I was in Palo Alto when they installed a 4-cylinder Diesel that was built in Germany, about two weeks before the war. It was quite an event, and a good many of us went down to see it installed. Their Diesel plant at the present time is somewhat obsolete, but they are still operating a certain percent of it, for the reason that most of the wholesale energy rates that we have are based on a demand and energy basis. By having these old Diesel plants without any particular value in communities and operating them on off-peak loads, the rates are reduced considerably, of course, always dependent on the way the wholesale rate is based.

But invariably the wholesale rate is based on a demand and energy basis, which, means that if you can take care of your load during the peak hours with a Diesel plant, a short period of probably three or four hours, it reduces your ultimate cost considerably. I think that is in line with Mr. Wood's contribution stating that it is beneficial to invest in a plant.

THE CHAIRMAN: There are several factors that would enter into a decision of that kind, are there not? Fundamentally, the

decision ought to be made on the basis of comparable costs and comparable results over a period of twenty years, taking into account every element that can be anticipated.

One of the reasons that no project has been started in the State of Washington is that the president of the power company, from whom we ought to get juice, has maintained from the beginning that the borrower shall never sell electricity for less than the retail price charged by the company. The Administrator rejected that and has rejected it consistently, and it has caused several months delay. Now, the proposal is that the borrower shall make a profit on his business, or not lose money. If I had the last word, I would have ushered the man out of my office, inasmuch as I am a Government employee, and would have decided right there to build a generating plant. I think it is an insult to the United States Government for any private corporation to require that its books be audited by its people or by people that might be set aside by the corporation to do the auditing.

Under this statute the administration is responsible for seeing that these projects are self-liquidating.

It is sufficient, it seems to me, that the borrower pay him the price agreed upon. Beyond that he has no interest and should have no interest.

We do not know what will enter into some of these things. Mr. Herring has said that it would have been better if we had built some plants. Well, if that is true, it is about time we quit indecision, at least. We ought to decide whether we are to build them or not. If we are going to build them, let us build them. If we are not, let us wash out. But let us not be rubbed out all the time by people who have a selfish interest in seeing us not do it when it should be done. I think there are brains enough in this organization to determine when a plant ought to be built and when not. If we determine that it ought to be built, we ought to have the courage to make the decision to build, and then stay with that decision.

It is not good psychology to threaten children, and I do not think it is good psychology to threaten power companies. We complain that they play politics with us and with Government operations. We are the ones who seem to have been playing politics. I think we have to quit vacillating, telling them one day we are going to do a thing and telling them another day we are not going to do it yet, but we will do it. I do not think we ought to be in that business. I think we ought to get

the facts and act accordingly. We ought to be fair to utilities and manufacturers and other vendors; that is all. And let us not say they are not fair to us until we are sure that we are fair to them; and we are fair to them when we protect the interests of rural people in the way the statute provides.

Mrs. Haines, are you prepared to take Miss KneuBuhl's discussion now before we go on with the next one?

MRS. HAINES: I should be very glad to do so.

THE CHAIRMAN: All right. Miss KneuBuhl cannot be here, and she has asked Mrs. Haines to give her reports and her discussion to the Conference.

I think everybody here knows Mrs. Haines, who has been with the Utilization Section a long time and has visited territories with a good many of the field people. Mrs. Haines.

MRS. HAINES: Mr. Carmody says that I am here to take Miss KneuBuhl's place. With your permission, I should like to say that I could not take her place. I am here to do a task for her.

It seemed to me that in the days of our Conference "education" was thrown out of the window. It was rather in disrepute. Yesterday and today I think it is at least inside the house again.

Adult education, the TVA people say, is the most important thing that has to be done now, among the many important things, for the rural people. As you know, Dr. Knapp, who is the father of the extension work of the Department of Agriculture once made this statement, and on it the whole theory of the work of the Extension Division of the United States Government is based, "Don't tell them; show them."

On that theory I suppose our demonstration farm in Virginia was developed. It has been a useful thing; it has been a cooperative effort. It has had a good deal of publicity. It has had nurturing care from a good many people. I think it would be safe to say that it has caused a good many headaches, too.

You might be interested in knowing that 8,186 people have visited that farm since it was officially opened on the 22nd of July 1936. We have had visitors there from thirty-two different countries. You may think that all of those foreign visitors came during the World Power Conference; this is not true. We have had foreign visitors there every month since the farm was opened.

In December I took the head of the Extension Division of Australia there, and we spent four hours at Rosedale.

I think perhaps our experience in setting up this demonstration farm in Virginia may be a great help in setting up other demonstration centers. The criticism of people who have come to "Rosedale" may be of value.

Of course, I am not there so much of the time, but when I am there, I take occasion to talk to people or they take occasion to talk to me.

I think one of the most disappointed persons we have had visiting the farm started in on me this way — he was a New Yorker, and I, being a New Yorker, could "take it" — he looked around and said, "Well, I understood that Mr. Cooke was interested in soil erosion. If he is, this is a good place to start work." He also said a good many other things of that kind, and I let him say them all. Then I took him and his party to luncheon and got him away from the farm to a place where he could look over the Virginia hills. We sat down and talked things over very pleasantly. I think when the luncheon was over, he realized that a demonstration farm, or a model farm could not be developed in the course of a very few months. I tried to tell him that it was a demonstration farm and not a model farm, but out of that demonstration, model farms might be built.

Another type of criticism came from a young agricultural engineer who had brought forty of his students there. He was very tactful. He wanted to voice his disappointment, but he wanted to do it so that no one's feelings would be hurt. I suggested that he not mind me at all, just go right ahead, and he did. He talked about the chicken house and the pale looking chickens that had been reared in the electric brooder. Then he made many other comments. I asked him many questions and told him how helpful I thought all of his comments would be to our expert who had charge of the maintenance of the farm. That perhaps he would be interested in knowing that our expert agreed with him, on all of those things, but that it was a good thing to have his opinions verified by another expert. I think he left feeling that he had made a contribution to REA.

I have here a letter from another young agricultural teacher in Virginia. He wishes to bring eighty of his boys there this coming month. I tell you this to let you know the variety of people who have visited the farm and tell you their reactions since they give an indication of the value of this type of work.

Two or three weeks ago Mr. Smith and I met with a group of extension people in Virginia. The Home Demonstration Agent was very anxious to bring 350 of her women there.

The visitors to the farm have represented a wide group of interests. It is not well for us to assume that, because all of the visitors are not engaged in agriculture at the moment, they have no interest in it. We took a group of professional women there one day, and I discovered that in that very small group there were five women who owned farms, none of which was smaller than 100 acres, and one of them was over 500 acres; all of those women were running their farms at a profit. They applied their good business sense to their operations.

We shall see, during the coming months, the continuing results of the wide effort that has been put forth to get people interested in this farm, and I, for one, hope that it may be kept open at least during the spring, summer and autumn months.

We have set up three farms in Virginia, within a local project area. They represent the dairy industry, general farming, and poultry raising. These are what they call the local area demonstration centers. The people there are working in some instances under the supervision of the Virginia Polytechnic Institute.

Meters are put on various pieces of equipment and are giving them very practical knowledge of what the use of electrical equipment is going to cost in dollars and cents.

Those farms do not begin to have even their proportionate share of visitors, and if they are to serve their purpose fully, I think it will be necessary for greater publicity to be given them. Groups in the local areas should be asked to cooperate in seeing that the people of the localities do get there. At present they are not doing it to the extent that they should.

We have set up in Virginia some work in the consolidated rural schools. At present five counties are putting on an essay contest. This effort is made to build load and bring new customers onto the lines. At the present time there are only two customers to the mile, and income from the lines already energized is not paying the running expenses.

THE CHAIRMAN: Is that Virginia-Caroline?

MRS. HAINES: Yes.

For that reason it seemed necessary to give a little impetus to the thinking of people in that locality. We suggested that this be done by a contest put on in the schools. The extent to which we shall guide it will depend, of course, upon the ability of the county superintendents and local sponsors to carry things through. The assistance that is given superintendents must be gauged by each person's ability to handle his own job. We found one superintendent down there who grabbed off $180,000 of the WPA funds of the State and built himself five perfectly splendid modern consolidated schools. That man does not have to have much direction for his thinking. He is already well on his way.

But the superintendent who is not just sure how he is going to get a new basement door for one of his schools is going to need to have his hand held, I am afraid, right straight through from start to finish.

This essay contest will be sponsored by the Farmers' Rural Utility, the local sponsor, the county agent, and the entire county school set-up. They do not have a home demonstration agent there, but the county agent is, I think, going to be a very useful person in that picture.

By putting on this contest at this time, it seemed as if it would be possible to get a good many people interested in electricity who are just passively now watching the lines being put up in their locality.

The whole problem of getting more people interested in using electricity, according to Mr. Ramsay, should be laid in the laps of local sponsors as much as possible. Undoubtedly there will be only a few sponsors who will not need help to put sufficient load on their lines to pay the Government loan.

I talked to Miss McKinley of the General Electric the other day, when she was here in Washington. She said that the school is one of the most worth while places in which to put forth effort and would undoubtedly yield valuable results.

When I visited the Tide Water Power Company, Wilmington, North Carolina, I found that they considered work in the schools of such value that they were willing to equip the domestic science rooms in twenty-two schools with all the necessary electrical equipment and pay for the current that was used there for a year.

That current the first year amounted to $700 in these twenty-two schools. The amount of equipment sold by the company because of the interest engendered in the use of electricity by this plan was sufficient to cause the company to continue its equipment and furnish the current in those particular schools for another year. When the company figures that this equipment will no longer be necessary, having well-sold the territory, they plan to take it out, recondition it, and put it in twenty-two other schools in new localities which they will serve by that time.

I believe Miss KneuBuhl feels, that it is impossible to overlook the schools. In fact, she wants to make the little red schoolhouse go modern.

You will be interested in knowing that every county superintendent and every principal with whom we talked agreed that an essay contest and a short institute course for rural teachers would be a good thing. They offered their cooperation, and they were interested in having an institute carried on along with any demonstration work which could be planned. Demonstrations are difficult to carry forward in most instances because of the shortage of people capable of doing this work in the teaching profession. Mr. Davidson, the superintendent of one county, said that he could not put his hands on a single person who could go into his county and adequately teach the uses of electrical equipment as he would like to see it taught. For that reason, he was much in favor of having the county superintendents call in their teachers for a day's intensive training given by instructors from the Virginia Polytechnic Institute, the REA, and the rural utilities, not that it would do a great deal for them except to direct their thinking.

The demonstration center which has been put on in Boone County, Indiana, is one of the projects which Mr. Jenks was instrumental in establishing; he is going to tell you about that.

I just want to point up this little talk by saying that we cannot lose sight of the fact that the boys and girls who get the story of electricity in the schools at this time are the boys and girls who are going to finish paying for the loans which Uncle Sam is now making to their parents.

THE CHAIRMAN: Thank you very much. (Applause.)

Mrs. Haines was very considerate of us. She knows enough about what needs to be done in the broad field of education to have kept us here all morning if she wished to.

Before we get through I hope she will participate further in the discussion so we shall get a great deal more out of her rich and recent experience in that field.

Mr. Jenks is going to talk on the "Relationship of Local and State-wide Programs for Load Building." That is what the program says. He may talk about any phase of this load building activity that he chooses to talk about. Mr Jenks.

MR. JENKS: I am in perhaps an opportune spot here. My section chief and my division chief are both unfortunately absent today, so I could get by with saying almost anything I wanted to.

Likewise, the topic that has been given me could be answered in one rather short sentence, that the state-wide programs serve to coordinate and supervise the local programs. I an sure nobody here would disagree with me. We would not have any arguments, and it might all go off very smoothly.

However, I do not think that the purpose of this meeting is to have everything go smoothly and not get some constructive ideas and bring out some honest differences of opinion as to how this load-building program should be carried forward.

The Administrator has told you this morning that we must not lose sight of the humanitarian side of the program, that we must not permit ourselves to get into the rut of the private utility companies who attempt to load up the lines with appliances regardless of the ability of the customers to use them to advantage or to pay for the current that they consume.

I like to think of the load-building program as an attempt to do the job in a very short time, but at the same time to keep it low pressure, not to resort to high pressure methods that have been used in the past by utility companies.

That seems rather difficult of accomplishment. I am sure that all of us who have been working the field attempting to do this job during the past year have had to stick our necks out and try some new way of doing the same old job, adapting our load-building work to the cooperative organizations with which we are dealing.

That, in itself, introduces a problem, as you can well realize, because we have a diversity of interests between the cooperative organizations and the established manufacturing and distributing organizations. The manufacturers, on the one hand,

are somewhat in doubt as to which way they should turn, whether they should attempt to build up this cooperative merchandising field or whether they should fight shy of it and let some other manufacturer try it out.

If they, as individual manufacturers, try it out, they are going, naturally, to cause friction with their existing dealer set-up, which has been built up over a period of years. If they do not experiment with it, they are afraid they are going to be left out in the cold and perhaps the dealer set-up will be gone, and all merchandising will be done through the cooperatives at some time in the next few years.

So much for that general portion of the problem. I want to explain my conception of the work that has to be done, and please understand that this is purely my conception. I have not had an opportunity to discuss what I am saying to you this morning with Miss KneuBuhl or Mr. Ramsay.

It is my conception that the program must be divided into three phases. The first phase is that of organization, the pre-construction period, if you want to call it that. The next phase would be the construction period, the various activities that must take place while the project is being built. Then the phase that begins when the lines are energized comes next and continues as long as the line is in operation.

During the pre-construction phase the development people are giving information to the prospective customers as to the cost of operating these different appliances and the approximate original purchase price. They are attempting to stimulate their thinking as to what electricity can do for them, not in a vague, general, sociological way, but they are trying to give them specific examples of what a feed grinder may mean to them if they are feeding cattle, and what an electric refrigerator is going to mean to the farm wife.

That word-of-mouth education, if it is carried on by the development field people, can be supplemented by literature; it can be supplemented by the efforts of the home demonstration agents, the county agents, all the electrical contractors, and the electrical dealers -- almost everybody that is in the commercial field is interested in putting across this story so that he can in later days realize greater income from equipment sales, or fortify himself better in his own position, if his work is in one of the educational fields.

The second phase of the work becomes more intense. It is then necessary, in my opinion, for the manager of the project to have been selected, be on the grounds, and be working. I am not going into that any further than that one statement, because it comes up later on in the program. I am on record now, so I cannot slide out tomorrow when that is discussed.

The local manager, as well as the state-wide, if it is in a State where we have a state-wide organization, must begin intensively coordinating the work of the various educational agencies. He must plan actual demonstrations of equipment; he must plan sales campaigns, advertising campaigns and arrange with the local newspapers to carry free publicity on the uses of electricity. He naturally may not be in a position to do this without some assistance and some guidance. I feel that the utilization staff fits in here. It is our duty to attempt to give them the benefit of any experience that has taken place in the past.

In the third phase of the program our job will be much easier if the story has been properly presented during the first two stages. If the development people have not been overly optimistic as to their promises of what equipment will do, if their statements have not been fantastic and are not subject to argument, it makes the work of the commercial agencies much easier because they do not have to break down this overselling.

Certainly, after the moment the line has gotten under construction, there must be an intensive effort from that point on to acquaint everyone with the uses of electricity. Bear in mind that we are all more or less familiar with what electricity can do for us. Many of these farmers are not familiar with that. They are country cousins, and in that capacity they <u>do</u> know about our electrical refrigerator or our electrical household appliances, but they <u>do not know</u> about electrical farm equipment. Many of us know very little because there is not a great deal to know about <u>electrified</u> farm equipment at the present moment.

THE CHAIRMAN: A great deal to know but not much known about it, let us put it that way.

MR. JENKS: All right. But the development of specialized equipment is really just now getting under way.

I noticed that just in the last two months a new little feed grinder, which, instead of being an old type grinder with a motor mounted on it to drive it, which would naturally be

inefficient and give you low production for the kilowatt-hour consumption, has been produced which has the hammers of the hammer-mill mounted directly on an extended motor shaft so that there will be absolutely a minimum waste or power; this enables one with that little half-horsepower motor to turn out an astonishingly large amount of ground corn, chopped hay or ground oats.

Therefore, that phase of the work must be intense. We must all attempt to school ourselves in the new equipment that is being developed by keeping in contact with the agricultural colleges and the commercial interests.

I have spoken of these phases rather definitely as three phases, because there is a definite date on which we can say that we go from one phase to the other. The work, however, has to be continuous and has to be carried forward constantly.

So much as to a general outline of the program. I shall try to get down to my subject now before Mr. Carmody calls time.

The relationship of the program of the state-wide in relationship to the local: I am going to take the liberty of enlarging that to include REA relationship with both the state-wide and the local.

First of all, I feel it is the duty of REA to assemble, publish and distribute information on the uses of electricity, the prices of equipment, and reasonable figures of operating cost and production capacity of the various appliances. We should attempt to guide them as to what are sound technical standards or standards of construction of this equipment. Further, we should attempt to help them with their financing problems in the purchase of equipment. If we are not offering a financing plan, we should advise them of existing financing plans, so that they will know how they can purchase this out of income instead of out of capital.

It naturally is the responsibility of REA to devise both state-wide and local plans for educational meetings, sales campaigns, and demonstration centers, and to help in any way that we can in the training of personnel, both of the State and the local organizations. In some instances it may be necessary for us to help in their local work during an emergency or during an experimental test of some new type of activity that is being carried forward.

The function of the state-wide orgainzation is largely that of a district office in a commercial company. Upon it is devolved the duty of drafting broad, general plans that will be applicable to the various county organizations within the State. It is naturally necessary for them to train their personnel and to assure the selection of proper personnel.

Most important of all, in my opinion, is this, that the state-wide should have the responsibility of maintaining contacts with the agricultural colleges, with the agricultural engineers, and the home economists in the agricultural colleges. There is a great deal of work to be done with the State inspector or the fire marshal, according to the set-up in the individual State. We are interested, naturally, in having safe house wiring and farm wiring installations. Some plan should be devised in cooperation with these existing State agencies to insure that the wiring is safe and that the state-wide and the local organization, as well as REA, are not condemned for permitting unsafe wiring practices.

The distributors of equipment in each State should be contacted by the state-wide organizations, as well as the newspapers, for state-wide coverage. The state-wide should also be in a position to furnish speakers for county meetings, and they should help the county organization train speakers to meet with their smaller groups.

They should distribute educational texts and help in any way that they can to carry forward the local program.

The local organization, after adopting a plan of operation from the broad general plan that the state-wide has presented to them, will proceed to establish their contacts with their local contractors, dealers, and the educational agencies, their county agent and the home demonstration agent and their vocational schools, as well as their local publicity people, the local newspapers.

In mentioning the general plan, bear in mind that even in such States as Ohio and Indiana which have a well established Farm Bureau organization that has backed up the whole program of rural electrification, these various plans in the past have all evolved from the bottom and worked up to the top. It has been the initial incentive of a small group of people to gather around them a larger group, and from these larger groups gradually has grown this strong state-wide organization. That has been possible because there was no rush. They had ample opportunity to start at the ground and work up, building slowly and surely.

We are introducing a new problem to the cooperatives. We are starting from the top down, and we are building a big organization and dumping it into their lap, setting them up in the electrical business over night.

We certainly cannot permit them to mismanage and misoperate that business for any long period of time without seriously affecting the future of this project. We want the projects to be successful. We expect them to be. But we must go into them with our eyes open, and realize that we are introducing something to the cooperatives that they have not had to cope with before. We have to assist them in starting their planning from the top down, and to impose, if you please, a certain amount of overhead management.

The local organization will arrange and supervise displays, demonstration kitchens, and demonstration farms. It will naturally encourage all of the commercial interests to give actual demonstrations of the use of this equipment. It will prepare sales campaigns and distribute literature. One of its most important functions is to conduct customer campaigns, to be sure that everyone who was not hooked on the line at the time it was energized is hooked on as soon after that as possible.

I fear that I have taken far more time than I should, but I do want to bring up one point that might stimulate a little discussion. We have been intimating to all of the electrical cooperatives, the electrical distribution cooperatives, that it is the policy of REA to keep all channels of merchandise distribution open; in other words, that, in the case of Ohio, the Farm Bureau Cooperative which has engaged in the merchandising of equipment, is just another dealer as far as REA is concerned. We want them in our campaign. We want them to help in it in every way possible, but we cannot deal with them to the exclusion of the other dealers. Perhaps we are wrong in that policy. I am sure we all want to know it if there is an honest difference of opinion there.

THE CHAIRMAN: Excuse me; will you make that last statement again? I did not quite get it.

MR. JENKS: I say that in our work in the past, Mr. Carmody, we have advised our electrical distribution cooperatives that we were attempting to keep all channels of distribution open; in other words, that in the case of Ohio, where the Farm Bureau Cooperative has actually engaged in the merchandising of electrical products, we consider them as just another dealer.

They are brought into our meetings, and they have the same voice and the same opportunity to work with us in these campaigns in the equipping of farms. Perhaps that is the wrong attitude; perhaps we should do more to stimulate the cooperative merchandising of equipment. Our effort thus far has been based on the statement of the Administrator which appears, I believe, in the May or June copy of the Rural Electrification News in which he advised the National Manufacturers Association that this was our policy.

THE CHAIRMAN: It was and still is.

MR. JENKS: If we are not going to encourage our electrical distribution cooperatives to engage in merchandising activities, should we encourage them to set up separate cooperatives to engage in electrical merchandising? Should we advise them of various types of cooperative buying plans that can be used, which will perhaps not be quite so obnoxious to the established commercial interests?

The last question that I should like to hear some discussion on is, shall we engage in research to bring about specialized design of household equipment which will perhaps result in a lower priced product?

THE CHAIRMAN: I thought you were making a speech and not asking questions.

MR. JENKS: I have finished my speech.

THE CHAIRMAN: Oh, you are interrogating yourself?

MR. JENKS: On the program it says, "Questions", so I am placing a couple.

THE CHAIRMAN: All right.

MR. JENKS: I think there is no question about the advisability of research for farm equipment in the hope of stimulating early development of electrified farm equipment. I am a bit in doubt as to the research on household equipment. Bear in mind, one specific example, if we were to bring out a specialized electric range for rural customers at the moment, we, through our activities, have stimulated a market for a total possibility of about 150,000.

THE CHAIRMAN: An immediate possibility.

MR. JENKS: Yes.

Assume that ten percent of those customers actually were to buy an electric range. That is a very limited market as compared with the total volume of electric range business done during this past year, where they now have reached a volume of pretty close to a half-million ranges a year. It is my feeling that we might have difficulty producing any specialized design of range in small quantities at anywhere near the price that is possible on large-scale production of the standard models. Maybe I am wrong there, too. But those, Mr. Carmody, are two questions on which I should like to hear some discussion.

(Applause)

THE CHAIRMAN: Thank you very much.

RECESS

(Ten minute recess.)

THE CHAIRMAN: Somewhere in this program, I said that we ought to have some agricultural people in here, some people who know agricultural life and have made some intimate study of the specific problem of the farmer with which we are dealing. Many of us are known as city people even though we have lived on the farm in our early days, which is quite a long time back. We do have some agricultural people with us. I think as the program is extended; we shall have more. This morning, we have Mr. Meier, who was successful in his county agent work in an important county of the United States before he came to REA. He has already accomplished much in the way of helping us to see what we needed to do in order to serve the farmers and to help the farmer organizations to see what they can do to distribute the use of electrical energy. He can tell you a great deal more about it than I. Mr. Meier -- I thought we would have the discussion on this subject all at one time.

MR. MEIER: Mr. Chairman and members of the REA staff: Since I may strike a pessimistic note in my remarks, I wish to state in advance that in St. Louis County, the county in which I spent eight years as county agent prior to coming to REA, we built up the consumption of electricity; so I know it can be done. If the problem is approached in the right way, there is no reason why we cannot do it in this REA program, if we go about it in the right way, I do not believe there are very many people in the United States whom we cannot convince that the projects are feasible. I think the Administrator did mention that we have barely touched upon the possible use of electricity by the farmers. Mr. Carmody has already said some

things about having a little more agricultural information and training within our own staff -- members so trained, I should say -- and I think that although we do need a little more of such specific training, all of us can attain sufficient working knowledge to stimulate the interest required to bring about an open-minded attitude on the part of the farm people whereby they will continue to be supplied with information as we go along. As I see it, we do not have a lot of farmers who exist merely for the purpose of making electric lines pay, but we are building electric lines out in the rural territory for the purpose of serving the farmer and his family and our primary and final job is to work the use of electricity into the farmer's life and business so that it actually becomes an integrated part of it. This must be done in such a way that it adds to his income and his pleasure of living. He must be made to feel that he cannot do without it so that he wants to use more and more of it.

Now, low rates as the Administrator said this morning, are certainly the first step toward this objective. In St. Louis County, we had a very good rate schedule, that is, compared to most rates schedules over the country, but even so, the average consumption around 1930 was only between 600 and 700 kwh per farm customer. This has been pushed up, in the last five or six years to where I understand it averages in the neighborhood of above 1,500, as mentioned this morning, the immediate goal or minimum goal for REA projects.

Now, my subject has to do with the technical assistance that is available for developing the use of electricity on the farm. I might, first of all, cite more specifically the problems that we shall no doubt run into as time goes on and show how we need to bring the various agencies into the solution of these problems. Among the first things that we started out to do in St. Louis County, was the electric brooding of chicks. Well, it sounded very nice. The theory is very good. We worked it all out in the office and then we got three of our leading farmers to install electric brooders on their farms. They substituted them for coal or oil brooders which they had been using before. We knew there were a lot of things that needed to be corrected. When a farmer buys an electric brooder, he usually buys a brood of chicks. Oftentimes they get a disease called white diarrhea. I do not know of anything that can die faster than chicks afflicted with this disease. I knew we should try to avoid that. I was very careful to recommend that these demonstrators purchase chicks which they knew came from flocks which had been carefully tested for a long period of time and were reasonably free from this

disease. The farmers had to pay $16.00 per hundred for these chicks which was twice the price at which the average hatchery in the territory was selling chicks. After our brooders had been out for about three weeks -- between two and three weeks -- one lady, who incidentally was a member of the Board of Directors of our County Farm Bureau, called me up and said, "I am having trouble with my chicks. I have never had trouble like this before and have been raising chicks for many years." I asked, "What is the matter with them?" She said that the joints in their legs were swelled up and they could not walk. Since she was a member of the Board of Directors of our County organization, I hurried out to help her.

THE CHAIRMAN: Under public relations.

MR. MEIER: Very important public relations. Some of you fellows working in the field realize the importance of good public relations. You realize that they have to be kept up. So, in this case I got there as quickly as I could. We looked over these chicks. Frankly, I did not know what in the world was the matter with them. I instructed the lady to put a little potassium permanganate in the water. We always recommend that. I took some of the chicks back with me. We called the poultry department over at the agricultural college and called Burley Winton who is a poultry specialist. I told him of the difficulties we were having. He said, " I don't know, but one or two things have come to our attention and one is that the ration we are recommending may run a little too high in mineral content with that much bone meal." They had been using that ration for several years but apparently, here was the background of this acute condition. Under the conditions of coal and oil brooding, when the house is warm and the chicks exercise; no difficulty seems to be caused. But under conditions of electric brooding the heat was concentrated and the remainder of the room cold, the chicks came out to eat and then huddled under the brooder. They did not get as much exercise and the excess mineral matter in the ration was not worked off. As a result, there was this particular problem so it was necessary to go back and look over the rations which had been recommended and which had been successfully used for years. We reduced the percentage of bone meal in that ration and in a short time had no more trouble. This just indicates that some of the problems which we will run into are separate and apart from the electrical appliance business. The brooder worked fine but the chicks were dying. I tell you this lady was decidedly unhappy and did not think very much of electrical brooders. That is just an illustration. You see we did not have to bring in an agricultural engineer but had to go

to the poultry department where they knew something about rations, and the problems of poultry management. The situation had to be approached from a somewhat different angle when we introduced the electric brooder. The other day I was working with Mr. Jones in the Research Section -- and incidentally I shall say this for Mr. Adams' department, that all of the questions that will arise are not answered in his literature, (Farm Equipment Handbook). I think he appreciates that. We wanted some prices on milking machines; I called up the manager of the Maryland-Virginia Milk Producers' Association and asked him if he knew about the range in prices of milking machines. The first statement he made was, "If you want to buy any milking machines, I can tell you a place in Maryland where they have a thousand of them or more for junk prices." He said, "We don't buy milking machines because the farmers here cannot produce milk of the low bacteria count that is required in the Washington market, by using a milking machine." The trouble is that they do not clean them properly. It seems that with a milking machine, cleaner milk should be obtained than that milked by hand because the dirt, dust, and hay which accumulates on the cow in a day does not have a chance to drop into the milk as is the case in milking by hand. The rubber tubing on the milking machine, if not properly cleaned, will run the bacteria count up far greater than the dirt which falls from the cow. Practically all authorities on dairying will make that statement; Eckels Farm, which is recognized as one of the leading authorities, will make that statement. This is a problem we have to overcome. We have to develop a method of cleaning this machine -- a method so easy that the farmer will adopt it. So we thought we had made an excellent find on the REA Electrified Farm.

The Washington authorities require, in fact the health officer in Washington requires -- and incidentally, speaking about a dictator, if you want to meet a genuine dictator, all you have to do is to contact one of these health officers! Most of the milk regulations are written, stating that such and such conditions shall prevail and conclude with the sentence, "or in a manner approved by the health officer". Whenever one tries to say that the regulations say so and so, the above clause is pointed out to you and the health officer says, "That is what makes what I say, go!" You have to take it and like it. In Washington, the health officer says you cannot sterilize with any chemical substance and so we have to use heat.

It is necessary to use sufficient heat to sterilize the rubber parts and yet not enough to injure the rubber and for this the electric water heater should be ideal.

I thought this a fine theory. The heater could be set at a fairly low temperature and the rubber parts placed in a little wire basket which would slide into the heater and could be forgotten until time for the next milking. The water heater will run at a constant temperature and while running nobody needs to worry about it. The only trouble is that it is necessary to operate that heater below 170° F. There are many kinds of bacteria that survive that tempra-ture. When sterilized for a short period at 170° F, only a small percentage of the total bacteria remain alive. These are bacteria which withstand high temperatures; their growth is inhibited by drying and cooling the utensils. However, if left under conditions of that temperature, these bacteria quickly develop and you have millions of them in the course of a few hours. That theory was therefore out.

We must approach it from another angle. What should be the final solution before we can go out and say to these farm people, "Here it is! This machine is easy to clean. You will not have any trouble and it will not cause you to have a high bacteria count." That trouble must be overcome. We find that these machines are sterilized very effectively with chemical substances but we hope it can be done much easier with electricity. We want to add this other use on the farm and particularly for dairymen who are not permitted to use chemicals. That gives us some idea of the assistance we must lend to the farmer so that he will not be disappointed with a lot of electrical appliances. In the past, the power companies did not approach it from that viewpoint.

I agree with the Administrator about the electrical fence. At the rural electrification short course in Ohio this fall many of the power company employes took the attitude that the electrical fence be mentioned. This question was brought up when we were setting up the electrified farm. Before putting one on the REA farm, I took the trouble to write the people who knew about electrified fencing and from all of the informa-tion I was able to get, they had never heard of a single person who had been killed or injured by an electric fence built by a reputable manufacturer. In every instance fatalities have been traced to the use of homemade devices. I told those people that I thought it was better to point out this caution: "Don't build an outfit of your own because you are apt to kill someone with it. If you are going to use an electric fence, get one from a reliable manufacturer who has studied it. They can still stand improvement." I think if you read this literature which Mr. Adams has prepared you will find some of the questions we need to consider. Electric fencing does meet a real need. The

Department of Agriculture is trying to develop a program of soil conservation. One of the things retarding that is the fencing problem. When we talk of contour farming, one of the immediate obstacles is the problem of handling livestock and pasture. The electrified fence can fill a real need in getting farmers to adopt this better method of farming. That is why it is so popular. It is our job to get some of these research people to work out a solution to the remaining dangers.

Another thing that I think is worth considering is whether we yet have a refrigerator that really fits the farmer's needs. We have tried to take a refrigerator that has been built for city use and put it on the farm. The only refrigerator designed especially for farm use that I have seen is being built in Eugene, Oregon. Have any of you seen that refrigerator?

We must look at this from the farmer's viewpoint. The county agent, for instance, is trying to teach the farmer certain better practices. I used to watch people drive out in the country from St. Louis in the heat of the summer to get eggs and they thought those eggs were fresh. Some of them were from cold storage in St. Louis. Even though eggs are supposed to be fresh, they can deteriorate in quality in two or three days provided conditions are not suitable to preserve them. Just because an egg is laid two or three days ago is no reason that it is fresh! The farmer has to have the necessary facilities in order to keep them in first class condition and command the highest price. Perhaps a refrigerator is something that he can use which will aid him in more profitable production.

I do not know whether any of you have been around a farm where the cream has been allowed to accumulate for a week or ten days and is like a sour mash. Since good butter cannot be made from that kind of cream, farm organizations have undertaken to put a quality cream on the market. Refrigerators might be constructed with the thought of helping the farmer market a better quality of cream.

I think that Mr. Adams' research statistics indicate that the average size of a dairy herd is five or six cows instead of the twenty-five or thirty cows, we too often think of. The problem then is to meet the needs of the farmer producing from a herd of five or six cows as much as a farmer with twenty-five or thirty cows. Maybe we can build a refrigerator that has space in it for a milk can and that is so constructed that all of the factors of refrigeration will be properly taken care of. So the general purpose of refrigeration to meet the farmer's need is something on which we need more research; we need to encourage these research agencies.

Mr. Cooke has touched on some of the angles to be considered in this regard, namely, the question of manufacturers and agricultural colleges. One other place where the matter of public relations enters the situation, and that all of you folks who go into the field early in the game, I think, should strive toward, is the correct attitude toward these sources of information, on the part of farmers and directors on these projects. There are quite a few existing prejudices, of course, and there are many agencies, I appreciate, that do not have the attitude they should have. On the other hand, let us remember that the influence of the utilities, for instance, in the support of these educational institutions may not be as great as we may think, because where they have actually given financial support, it has been only a small part of the total amount of money which is actually expended by the agricultural college for its extension service and research work.

There are many persons in these institutions who recognize this situation. They know that most of their money comes from the Federal Government and from State legislatures. Further, most of the county agents have to go to the county courts or commissioners to get appropriations for their local expenses. So, you see, this money comes from many sources. If we believe that there are a few boys who are haywire, it seems that they can easily be taken care of. The Administrator seems to be very adept at rapping them on the knuckles. So, perhaps we can leave the knuckle rapping to him lest we leave the impression on the minds of the local people that these institutions are not sources of reliable information. Maybe, if we take it upon ourselves to lambaste the hard heads in these institutions, our local managers and directors may get the idea that we think the whole institution is bad. They may need it; I am not saying they do not, but we do not want to be misinterpreted. We should consider all of these factors. The farmer should utilize all of these agencies. We need to have them working with us in putting electricity to work on these farms in connection with other developments in agriculture today. I believe there is room here for a few questions if I have not talked too long.

THE CHAIRMAN: There is plenty of room for questions. Education is a wonderful thing and I am getting a lot of it myself. This reference to eggs and the natural course an egg wishes to pursue, reminds me of the fact that the purpose of an egg, of course, is not to be boiled four minutes and put on somebody's plate for breakfast each morning. The purpose of an egg is to produce another chick. Is that not true?

MR. MEIER: Yes.

THE CHAIRMAN: You are attempting to prevent an egg from fulfilling its purpose. Perhaps we should approach the problem from that end with a real appreciation not only of the purpose of the egg but the right of the egg and not take this dictatorial attitude over an egg and say, you must not become a chick, you must be stopped in your tracks right at this point.

Research must go on to provide refrigerators built for farm purposes. It may be that we are in the midst of an era in which instead of having everything designed for city folks, we shall begin to design them for farm folks and then city folks will find they can use them, not milking machines but refrigerators and stoves and many other things. I want to ask Mr. Meier at this point: you say in St. Louis County they were using approximately 600 to 700 kwh about five years ago and that has now been pushed up to about 1,500?

MR. MEIER: That is what I understand.

THE CHAIRMAN: Of course, St. Louis County is not a typical county for the United States.

MR. MEIER: No.

THE CHAIRMAN: However, there are many areas in the United States that are keen to get electric service. How can you tell whether they can afford it?

MR. MEIER: Yes. I think this might clarify it. When we first talked about introducing electricity, our approach was to find a real need of the farmer and use electricity in meeting it. At that time, transportation companies and dairy companies in St. Louis were turning from horses to trucks for delivery purposes. St. Louis County is an intensive market-gardening area and the manure used in hotbeds up to this time had been obtained from the stables of these horses. This change necessitated our hunting for a substitute. We began some research work. I think as far as we have been able to find out, we put in the first electrically heated hotbeds in America. I think that can be applied wherever there is real need.

THE CHAIRMAN; Have you encountered, since you have been with REA, other counties which you think are enough similar to St. Louis County to be encouraged where in the beginning anybody might say that the use might be 400 to 600 kwh?

MR. MEIER: I think that is true of most of the areas I have encountered.

THE CHAIRMAN: I am aware that these gentlemen here who have so much to do with approving projects, apparently find that there is no place in our files for that kind of statement and since it is not there, we say that if a man cannot pay a certain percentage of his income for electricity, we cannot approve a project because the Administrator has to state that it will pay out. If you had been faced with that in St. Louis County ten years ago, do you think it would have looked any brighter than some of the projects we are now doubtful about? Did it look any brighter then?

MR. MEIER: It did not look any brighter to us then.

THE CHAIRMAN: We know what it is today and we know that only one-half enough work has been done. If you had stayed there and they had put in another fellow like you, do you think the two of you could make it better?

MR. MEIER: I think so.

THE CHAIRMAN: That was not quite fair. However, what I am trying to illustrate here is, that from your own experience, there is nothing unsound about using imagination. It is not imagination really. It is vision, the kind of vision Henry Ford had to have to establish the automobile business and the kind of vision that every single entrepreneur who has started business in the past eighty years has had to have before the possibilities of a market were fully developed and generally known. Is that not it?

MR. MEIER: Yes.

THE CHAIRMAN: Let somebody ask an intelligent question.

MAJ. WERTH: I should like to ask about this refrigeration. Miss Neill has a project serving 150 customers down in North Carolina which, it seems to me, contains some of the elements that fit into Mr. Meier's program. The project includes the usual distribution system and a small Diesel generating plant. A leading citizen is prepared to put in a ten ton ice plant and operate it at eight tons, and if necessary four tons, in order to permit the people on the island, who do quite a lot of fishing and derive quite a large portion of their income from it, to have ice and cold storage available, and to discontinue using energy for the ice plant from the generating plant during peak loads. The man who represented the ice industry was perfectly willing, you observe, to build oversize and to operate it as an ice plant off peak. What actually

would be your idea of the size of the refrigerator necessary for a farm, in order to carry out these ideas you have? Must you have a refrigerator of twice the normal size?

MR. MEIER: The one in Oregon is being built in only one size, one compartment of twenty-two cubic feet, another cold compartment that runs below twelve cubic feet, roughly that at least.

THE CHAIRMAN: In other words, everything in the refrigerator does not get the same degree of cold at the same time. As a matter of fact you have classified refrigeration.

MR. MEIER: I do not think the job is finished yet on that refrigerator.

MR. BACON: Most of these people are ingenious. The question I want to ask is whether or not there is any plan provided whereby they could buy a refrigerator unit and build their own refrigerator. For instance, there is a place for asbestos, sawdust, and paper, a lot of things which are common materials. A lot of parts in the ice box can be bought.

THE CHAIRMAN: Do not forget aluminum foil.

MR. BACON: Could we not get them interested in what they could do in that direction so that they could build a refrigerator in which to put beef, pork or lamb instead of buying a commercial refrigerator?

THE CHAIRMAN: Our answer to that is to talk to these people and find one person who is interested enough to try it, if he can afford to try it. You get seventeen of them going and they all call for help like the woman director called for the county agent when her chicks got sick.

MR. SWANSON: They are doing that very thing at the TVA.

THE CHAIRMAN: Is that a unit refrigerator?

MR. SWANSON: No, it is an independent refrigerator.

MR. MEIER: I think Mr. Falkenwald wants to say something.

MR. FALKENWALD: Mr. Carmody, they have these refrigerators fifteen to twenty cubic feet in size in Texas. They are very satisfactory. The colleges have plans and specifications whereby the farmer can build the box and buy the commercial units.

THE CHAIRMAN: Have you fellows sent that in?

MR. FALKENWALD: No, I have not.

THE CHAIRMAN: You get hold of these things and then you only report on your technical job which is all wrong. We shall have to provide ways and means whereby our men in the field can get those ideas to us. They must not be put in their regular reports. I do not want it that way. They must come in such fashion that they can be distributed to the people who need them right away and so they cannot be held up by the people who do not know anything about them. Mr. Wood, do not sit down because you are going to get a chance in a minute.

MR. WOOD: I ran into an interesting thing when I was in the field in connection with this refrigeration business that, I think, has value. When I was in the Minnesota Lake country, I visited a project which appeared to be very poor. I would have been tempted to turn it down in some ways. However, there were a great many fishermen in that territory, people who worked at industry in the city in the winter and did a lot of fishing the rest of the year. There were also a great many tourists hunting and fishing. Time and time again I heard them say, "If we only had a refrigerator in which we could keep these fish until they could be shipped out to us, it would be a great help."

THE CHAIRMAN: As a matter of fact, it is not too late. You men in the field who have got hold of these ideas, write them down, classify them and send them in within ten days. Let us catch up with ourselves and then go on from there, illustrating those very valuable things that can have a vital and dynamic use if they get into the right hands throughout the organization. The trouble with us is that we do not know the United States. There are a great many people who have not traveled it and as David Cushman Coyle said, "This is a big country". There is a tremendous variety of activities and local life that we do not touch because we do not know anything about it. I have had more than an average opportunity to know the United States because it was my business for years to travel widely and still I do not know nearly enough about it and I cannot recall quickly all of the things that I should recall to be effective in the appraisal of such suggestions as you make of the characteristics of communities, in specific areas.

MR. CLARK: Most of those milking machines have one or two units so that you can milk one or two cows at a time and most of the units are supposed to milk four teats at a time. During

the drouth and cold winter, many of the cows are discarded all over the country from New Hampshire to Minnesota in the best dairy districts. Now, an effort is being made to remedy this difficulty with the dairy cattle. Has anything been done lately?

MR. MEIER: On the cow or the machine?

A. On the cow.

MR. MEIER: The dairy people, of course, regard it as one of the problems in the dairy industry and there is a great amount of work being done to check and control it. It has not been totally eliminated. There used to be objections to milking machines because they were thought to spread the disease.

MR. CLARK: We had trouble in Minnesota. We had more trouble with that than anything else. It has not been effective in checking garget.

THE CHAIRMAN: That is really a bacteriological question and it does have a bearing on the machines. Has someone else a question on the use of electricity on the farm? Who knows about the farming end of the business?

MR. COMBS: In regard to this farm in Virginia -- I confess I come from a city and that I know very little about farming. However, I have seen the equipment that the farmer has available and apparently the manufacturer has not been very efficient in making it. Anybody who is an engineer can tell you that. Why is not some effort being made on the part of the manufacturer to improve the simple idea of the mowing machine?

THE CHAIRMAN: I think Mr. Cooke answered that question when he said arrangements are being made to get agricultural machine manufacturers interested in integrated machinery. He is right. I suppose many of you remember when there was only belt driven machinery. Then you remember a big motor was put on the machines. Even when I became superintendent of a plant, we did not have a unit drive in this plant but the need for one was clearly indicated. I had unit drives installed just as quickly as I could get them put on. It was a makeshift in the light of later developments. There were no machines made then with built-in motors. We had to put the motors on. They are being built now with the motors in them.

MR. FISHER: One of the difficulties the farmer has is in accounting. He really has not the time for an adequate system

of accounting for his income and outgo and when it comes to cost accounting, that is even more difficult to carry through. Yet farmers have been persuaded to keep records on seeds and other things that have a very direct bearing on the profit of their business. I am wondering if Mr. Meier can tell us methods he may have worked up by which the farmer can be helped to see the relative savings that he may make with regard to certain applications of electricity in his business.

MR. MEIER: I did the greater part of that on most of our appliances in St. Louis County. For instance, we had a recording thermometer and a submeter on the electric brooder, and then we got the farmer to keep feed records. We selected the farmer who already kept feed and mortality records on his chicks, so the electrical application was the only new factor introduced and we usually tried to find somebody who had a rather definite idea of how much it costs to operate a coal brooder. Then we held a community meeting where people could see these chicks. We used circular letters and newspaper advertising and many other means of disseminating information. I think it is very worth while to have somebody keeping those records in a community. We know from previous data what the records will show but they are most effective if secured in the immediate community, in such applications as threshing, silo filling, etc.

THE CHAIRMAN: Some of the best work is being done by Dr. Norton of Farm Credit. She is a former school teacher from Minnesota interested in farm people. She came to the conclusion that the unit on the farm is the farm family and that all activities on the farm should be worked through the farm family acting as a council. Every member of the family participates in one way or another under this plan. Dr. Norton has achieved remarkable success. In regard to cost keeping, no investment is made in appliances and implements unless the family feels in advance that they can afford them or can be shown by figures over a long period that it is worth while to pay out their money. If we are not in touch with this, we shall have to check with Farm Credit.

MR. MEIER: In other words, we are interested in seeing these electrical appliances used and perhaps we must stop and teach these people a system of accounting.

THE CHAIRMAN: If we could find some of our clients who are doing this, then we could proceed with the project.

MR. FREEMAN: I should like to ask this question of Mr. Meier. We are going into communities where they do not have electricity.

Now, in Mr. Meier's St. Louis County, he indicates that they started with a load of 600 kwh per year. On these projects which are starting at scratch, where the farmer has to learn to what uses electricity can be put, where he has to make a considerable investment in equipment and where he does not build up much of a load, I should like to ask how long he thinks it will take to build that load?

MR. MEIER: I think there is some compensation for that in that we now have many appliances that we did not have five years ago, which would counter-balance some of the unfavorable conditions that exist in many of these places. We worked it out generally in a manner similar to our solution of the hot-bed where, for instance, energy was recognized as a practical necessity by everyone in the county.

THE CHAIRMAN: In fact, you did some research on it right there.

MR. MEIER: We made up the hotbeds ourselves using three-quarter inch water pipes and filling them with porcelain tubes. On these jobs, we used ordinary resistance wiring; we wrapped the wire, I think, on an endgate rod from a wagon and put it in the pipes. We made our own units. However, we more or less improved the hotbed type of heating. We put our units in the soil, some people put them underneath the bed while others heat the air above the soil. Research is still going on and new improvements are continually being worked out, however, I think we have made enough progress to overcome in part the less favorable conditions.

THE CHAIRMAN: Neither Mr. Jenks nor Mrs. Haines has been questioned on his or her presentation. Does anyone have any questions with respect to this broader education program that Mrs. Haines described for us?

MR. BACON: I should like to know how you proceed in establishing your demonstration unit? In other words, down in Kentucky, I had fifty-six county agents who were very anxious to put a demonstration unit in there. I think we had the greatest number in Alabama. I know in North Carolina they begged us for one. Virginia talked about two or three. Is it the policy to spread them demonstratively as a unit on different farms -- dairy and poultry farms in general? What is the plan for spreading this unit?

THE CHAIRMAN: Mrs. Haines, will you answer that?

MRS. HAINES: In the Virginia area, two or three farms were set up under the advice and care of some REA representatives.

I think Mr. Jenks and Mr. Meier went down. The point is, that they are now having some supervision from the Virginia Polytechnic Institute and the Farmers Rural Utilities, Incorporated. As I said this morning, how many more will be established, remains to be seen. I think, probably, the guide will be the value received from the three farms already set up.

MR. BACON: I do not want to go into the field and stimulate interest in the demonstration farm and then come back and find that you do not want one.

THE CHAIRMAN: That is a policy question. Neither Mr. Ramsay, Miss KneuBuhl nor the Administrator is here. They are the three who could answer that question of policy.

MR. FREEMAN: In this same connection, since they have three farms in Carolina County, it would be interesting to know the effect they had on the use of power. Has anybody ideas on the consumption of power?

THE CHAIRMAN: You have to take into account, in addition to what you are using, the effect this consumption has had. You are scientist enough to know this. It is necessary to get down to the most exact element that you can get. You want to get the character of the people, the amount of power they might reasonably be expected to use, what their activities are, how much they could afford to use, how long they have been using electricity, and how generally they have been exposed to its use. What is their attitude toward electricity? So now, you are rendering a broad answer to a question that requires a lot of research.

MR. FREEMAN: I think I know the answer.

THE CHAIRMAN: That is just what I am afraid of. I am telling you the answer is extremely difficult to get and if you did not go through all of these processes, you would have no answer.

MR. FREEMAN: That project, if I am not mistaken, is using something in the neighborhood of 70 kwh per month. It was set up on the basis of 70 kwh per month and the statement was made that when the project was put through, there would never be a usage of 70 kwh per month. It seems to me that the demonstration farm is the answer. If we can demonstrate the use of electricity, it will be used by the farmer.

MR. FISHER: I understand that the roads are so bad, you cannot get to these farms as yet.

THE CHAIRMAN: That is my point. We are apt to reach conclusions on half-information and not only on half-information -- but I do not think that anybody here will admit that a thorough going job has been done in load building there yet.

MR. FREEMAN: Oh, no. They have reached that without much help and it was said the average would never reach a consumption of 70 kwh.

THE CHAIRMAN: Go ahead, Mr. Adams.

MR. ADAMS: Mr. Freeman's question was a complete surprise to me.

THE CHAIRMAN: Only to you?

MR. RAMSAY: In a broad sense, he is too pessimistic. The consumption is 86 kwh.

THE CHAIRMAN: How old is the project?

MR. ADAMS: It was energized in August of 1936. Unless the figures themselves are treated properly, false conclusions can also be drawn. That high average is brought about by commercial lines. The farm line is quite encouraging. It is running about 55 kwh. It has come up to the level of the general average.

THE CHAIRMAN: I am glad you made that explanation. All figures are significant. If the average rural project can hope to get a commercial rate comparable to what they got in that case, that means so much more. Even if that project will not reach 55 kwh, that is real progress because I had been thinking in terms of 30 and 35 kwh. I am still hearing that in these areas where people have about the same kind of homes and prospects for income, they will not get 40 kwh. If they got 55 kwh without a little bit of help and with bad roads, what could they get with a well-rounded-out program, our help and local cooperation? I do not think that is conclusive. You have shown a tentative result.

MR. LONG: I think we realize the full significance of the Utilization Section because after the Development Division is out and the engineer has withdrawn from the picture, a local organization is a division of this organization that will make the accounting system or the accounting department happy. I should like to ask just how these farm organizations are reached through the Utilization Section -- whether through the State extension service and

home demonstration agents or whether a policy has been set up by which the Utilization Section attempts to go out and reach the projects themselves. What system has been used? I should like a little information so that when I go out in the field, I can tell the farmers where they can use this electric service. I should like a little discussion along that line.

THE CHAIRMAN: How long are you going to be here, Mr. Long?

MR. LONG: Probably to the end of this week.

THE CHAIRMAN: I think Mr. Fisher and Mrs. Haines have the answers to some of these questions that will give the field men specific information. This ought to be discussed at a smaller staff conference when Miss KneuBuhl and Mr. Ramsay can be there, before the men go out.

Does somebody else have a question?

MR. LAKE: May I talk once more?

THE CHAIRMAN: Yes.

MR. LAKE: I just wanted to put over the idea that I have always had in mind and that is, if you have just 100 kwh a month on a farm, you do not have rural electricity. There are ten houses on my street, six-room houses, and there is not a single house on that street that does not use over 200 kwh per month. If a refrigerator is put in a farm home, there cannot be less than 50 kwh even if there are no lights. It is the same way with the range. It is necessary to have 125 kwh more for an electric range. These two items alone are the main items to put in the home. Of course, the brooder for chickens, and the incubators, make up the load. The washing machines are not large load builders — for this, the refrigerator and the range are most important. I am wondering whether we are considering these two things above everything else.

THE CHAIRMAN: There is plenty of time to consider everything.

MISS TAYLOR: You know in this problem of building load that the rates which the consumers of many of our projects are having to pay are rather high, especially for certain household appliances. I meet this problem in the field. I am asked, "Miss Taylor, at what rate do you think that people can operate an electric range economically?"

Let me give an example of the rates charged on some of our projects. I remember one on which the rates were 7½ cents for the first 30 kwh, 5 cents for the next 30 kwh, and 3 cents for, say, the next 140 kwh. The average cost of the first 100 kwh on this project was over 4½ cents or nearly 5 cents per kwh per month. The second 100 kwh were sold at 3 cents each at which rate the electric range may be desired.

Now we know that people whom we consider authorities usually say that an electric range cannot be operated economically at a cost of more than 2½ cents per kwh, and that a cost of 2 cents per kwh or less is better. Now, what answer can I make to the question asked me? How can I justify the use of an electric range with the rates being charged these consumers? It is a problem. However, I do come back with this answer, "What are you paying for the fuel you are now using?" One farmer said that he was paying $2.00 to $2.50 per month to get his wood hauled to the yard to be used -- as I remember the statement.

THE CHAIRMAN: They usually talk about it in cords.

MISS TAYLOR: He estimated that it cost about that much per month to get the wood cut and hauled in. If he used an electric range and we estimate that the family would use about 150 kwh per month, it would cost his family, at 2 cents per kwh, $3.00 to operate the electric range, or it would cost the family 50 cents more per month than cutting and hauling wood. In a case like this one I come back with this question: "Is it worth 50 cents a month more to you to have the cleanliness and convenience of an electric range?" Now if he had to pay 3 cents per kwh, 150 kwh would cost $4.50 and an extra cost of $2.00 would have to be justified.

I am always glad when I hear of water heater rates. I am glad when I hear of range rates, which is very seldom.

Other Government agencies are urging rural people to budget their money and to buy electrical appliances as well as other purchases wisely. These agencies think it important to advise rural people to be cautious about their purchases so that these people will not spend more money for appliances than they can afford, nor for appliances for which they will have little or no use.

We do have a question with regard to operation costs. I shall be very glad when rates become lower. To me the factors involved in the use of the range for load building are based:

first, on the rate, and secondly, on the methods a woman has in using her range.

Low rates and proper operation of the electric range will keep it from being housed in woodsheds as many sold by utility companies have been housed after the cost of operation was found to be high. We must be careful in urging people to buy electrical appliances to be able to justify the purchase of these appliances which we recommend.

You may be interested to know that many of the county agents and home demonstration agents all over the country are inadequately prepared to give information on the uses of electricity and electrical appliances. They are asking for information -- really begging for information. Last week I was at a meeting at which plans were being made to compile such information, from a scientific point of view, and to put it into the hands of these agents and rural people. In the future, I think extension workers will be given more training than they have at present to help take care of this program.

THE CHAIRMAN: You raised a point, Miss Taylor, that is very interesting. You said you would be very glad when the rates went down. Miss Taylor is in the educational business. She talks to groups of women and groups of men. I dropped in at one of her meetings at the University of Wisconsin. I discovered that she was there and I listened to the demonstration and it was very well done, I am glad to say.

But here is the point. Everyone of us who comes in contact with people in the field -- whether they be sponsors of projects or whether they be citizens who are interested vitally or mildly, whether they be farmers who are wondering whether they ought to subscribe to this use of electricity through cooperatives, or farmers' wives who attend these demonstrations and are anxious to find out the cost of electricity and how much drudgery they can abolish -- is faced with this problem. Every one of those persons wants more than we can possible offer or they want what we can offer for less than we can offer it to them. Let us get this story. These lines being built in the rural areas are being built with Government money which is lent to the sponsors, not on the basis of a twenty percent margin or a forty percent margin, but the full value of the enterprise is advanced by the Government so that the people may get a service that they never got otherwise. They may own the property after they have used it for twenty years. That is number one.

The second point is that the power rate or rates have come down all over the United States. Now, the rates for the farmers who never paid anything have not come down but the fact that they have come down for his neighbor or nearby power lines, if you please, gives promise that the trend in rates will be downward for all users. They will be less still as REA goes forward. Through that contribution and others, the whole trend of rates is down, the whole trend of appliances is downward and will be downward more sharply in three years, irrespective of what might happen to our wage scale and general economy unless we have unreasonable and unexpected and unanticipated inflation. The general trend is important. Today, you get an automobile for $600 that would have cost $2,000 a few years ago and the wage scale is higher, too. It is three times what it was when cars cost four times as much money. Wide use and competition did that job. No other industry in the whole United States has been so affected on its economic side as the automobile industry.

I am talking to you a long time about it because I devoted a great deal of time to it when I was manager of a trade journal. In the middle of the depression, Walter Chrysler put six million dollars' worth of new equipment in his plant, new equipment that was integrated, if you please, from beginning to end. I could tell you a lot of things about that industry. The leaders work to achieve a low price by a large volume in production. Now, I say that because -- let us not have a defensive psychology at all. Let us not have an apologetic policy outside with respect to the people we deal with. Let us strive here constantly for reduction of costs and better service.

(ADJOURNMENT - 12:45)

Washington, D. C.

February 5, 1937.

The fifth session of the Administrative General Staff Conference of the Rural Electrification Administration was called to order 9:00 a. m. Friday, February 5, 1937, by The Honorable John M. Carmody, Deputy Administrator, Chairman.

THE CHAIRMAN: Yesterday afternoon it occurred to some of us that we had overlooked an opportunity to present to you some of the material that is used in exhibits that are prepared by the Utilization and Information Sections. There is a unit devoted to the exposition of the program at conventions, State fairs, conferences and so forth, where a visual as well as an oral presentation of the REA program may lead to a wider understanding of its purposes and its objectives.

Mr. Phillips, who is the head of that unit, is here, and I am asking him to say a few words about this program and the exhibits. Mr. Phillips.

MR. PHILLIPS: The material which we have put up here is a sample of the kind of displays we are using at expositions.

THE CHAIRMAN: I think I ought to say that it was assembled hastily, because we did not tell you to do this until last night, and some of the best material is out of the city on exhibit, or in storage.

MR. PHILLIPS: Yes, we had to put it together rather quickly, and some of the larger pieces are not available. We have some dioramas which have been quite popular; these are large and cannot be moved with ease. This material is usually put together in a design which attempts to tell, by a complete story, what the situation is; and these things have just been taken out of the complete show. We use charts and photographs very liberally and, wherever we can, we use animation and lights. These two charts in the middle (referring to charts set up on the stage) are examples of our lighted charts. Lighting and movement gain attention.

The Exhibit Section sends these shows out to expositions and conventions, as Mr. Carmody says, and we manage to stay quite busy keeping them going.

The section has charge of the photographic work, and of getting out film strips; we also help design various publications. I think that is all I can say, Mr. Chairman.

THE CHAIRMAN: No, do not stop. Where have these been shown, or where has similar material been shown?

MR. PHILLIPS: During the last year we showed, or had an exhibit, at the Great Lakes Exposition in Cleveland. We had another exhibit at Atlantic City at the Annual Meeting of the American Society for the Advancement of Science during Christmas, and several smaller exhibits in various places throughout the country. We are just now preparing an exhibit for the Museum of Science and Industry in New York. All this material will be shown there in a diorama. This is an opportunity because the attendance at that museum is somewhere in the neighborhood of one and a half million people a year. We are constantly sending things out into the field for small meetings.

THE CHAIRMAN: Will our exhibit there be attuned to the philosophy of the museum, which has adopted the Munich idea of having electrically driven exhibits that visitors themselves operate with push buttons?

MR. PHILLIPS: Our exhibit will not be that kind, but it will be worked in with the whole scheme of the museum.

THE CHAIRMAN: Could we by pushing a button show a lantern in a barn, and by pushing another one show a lighted barn, or is that too expensive?

MR. PHILLIPS: No, that would be a very good form of exhibit. One of our dioramas does that automatically. The value of having the spectator push the button is that he feels he has done something about it.

THE CHAIRMAN: Do I understand that our exhibits will show dark spots in the country which can be lighted up when they are electrified -- dark barns, dark houses and houses without electrical appliances, as against houses which do have them?

MR. PHILLIPS: We have not yet done anything of that kind. The Soil Conservation Service has a model of that kind -- the countryside with and without electrified buildings; lights flash on and off.

THE CHAIRMAN: What is this scientific device here which you have named several times, the name of which I have not gotten?

MR. PHILLIPS: A diorama.

THE CHAIRMAN: Maybe I know what it is without knowing its name. What is it?

MR. PHILLIPS: A diorama is a representation of a scene shown in perspective. It is a replica, in small size, of any object that the exhibitor wants to show. Ours is one which almost everyone here has seen, a farm house before and after electrification. It is on a turntable.

THE CHAIRMAN: I know about it but did not know it by that name.

Now, I am sorry we do not have photographs here. We have literally hundreds --

MR. PHILLIPS: Thousands.

THE CHAIRMAN: Are they used or are they useful to the people in the field?

MR. BACON: I am often asked by county agents and also by home demonstration agents whether we have material which they can use. They would like to hear about it.

MR. PHILLIPS: At the present time we have two film strips on electrification generally, showing the various benefits of electricity.

THE CHAIRMAN: I think we ought to tell a little more about them. It might be a good thing to have them brought in here. Apparently, we are going to have a little extra time, and instead of recessing, we will look at them.

I wonder what about this Swedish barn?

MR. TAYLOR: That picture is still in town.

THE CHAIRMAN: Would it be too hard to get? How many of you field people know the story of the new and coordinated Swedish barns, the integrated Swedish barn?

VOICES: Never heard of it.

THE CHAIRMAN: Never heard of it. My goodness! My goodness! Talk about publicity. We cannot even tell our own people.

MR. ALLEN MOORE: Did we ever get an exhibit at the Texas Centennial?

MR. PHILLIPS: No.

MR. ALLEN MOORE: It is going to be in session next year.

(Discussion off the record)

THE CHAIRMAN: All of you men should know about this Swedish barn. It is a very significant and important development, which in many respects has even greater possibilities of development here than where it was originated, if we go about it intelligently and patiently.

MR. SARLE: May I ask a question, please?

THE CHAIRMAN: You may.

MR. SARLE: Who has charge of the dissemination of our literature, particularly having to do with utilization? Does the Utilization Section, or you, yourself, Mr. Phillips do this?

MR. PHILLIPS: I believe Mr. Walters, in the Information Section manages that.

MR. SARLE: Oftentimes we are asked by people in the field to whom they should write for literature particularly the Rural Electrification News, and also for the shorter pamphlets.

THE CHAIRMAN: The whole division, headed by Mr. Ramsay really is responsible for that. There are in that division several sections, and they are more or less related. I think an inquiry to any of these sections would receive prompt attention.

Let us find out today from them how they want you field men to have inquiries addressed -- whether they want you to write to REA, or whether they want you to write to the head of the section or the head of the division. Let us find out today.

Will you put that down as a question, Miss Blades, and see that it is answered?

MR. RUSSELL COOK: Mrs. Harfield is here and can answer it. There is a Correspondence Section in REA, under Mrs. Harfield, and any information that comes to the organization is directed to the proper division by Mrs. Harfield's section. Thus, if it is addressed to the Rural Electrification Administration, they will see that the proper division gets it.

The names of the chiefs of the sections should not be sent out to have people write to them; they should write to the organization.

THE CHAIRMAN: I think we ought to tell Mr. Walters or Mr. Ramsay that we want somebody here to answer questions. We shall see the Swedish barn here sometime during the morning, and perhaps we shall also see the short films which we have. We shall let the subject rest for a few minutes until we can get the people here who really ought to be here.

We shall hear from Dr. Craig, who will tell us about the apprentice engineers. I hope Dr. Craig will say a word about how the idea originated, how the men are selected, what training they are put through while they are here, and what the objective of the training is for them and for REA. Also say a word about what you do, Dr. Craig. People do not know.

MR. CRAIG: That is quite a large order, Mr. Carmody.

Some of the questions which Mr. Carmody has asked I shall not attempt to answer. I will reserve the right of all witnesses not to testify against themselves.

Mr. Carmody and members of the REA: In the latter part of July, 1936, the personnel of REA was enlarged by the addition of ten new members, a rather cohesive group, and it was felt desirable to honor them by some separate title. After much soul-searching upon the part of the Personnel Section, there was finally advanced the very euphonious term "apprentice engineers".

This has served for all those who mention this group in an official manner, except for the few to whom the spelling of this word "apprentice" is a difficulty. They have abbreviated it for this purpose by the use of the word "student".

Unfortunately, within a period of a few weeks, one of this group became seriously ill and died. However, retaining its faith in the mystic number of ten, REA chose a new member.

Time marched on.

And in the later days of October another group of ten members joined the REA and became members of that band officially now known as "apprentice engineers". But here again fate stepped in, and unfortunately again the first ten had become nine, through the lure of the market place; it was not until January 23, 1937, that the complete membership of twenty was attained.

These members of REA were young men who had recently completed requirements imposed by schools of engineering for graduation. They came from twenty schools in twenty States, from Maine to Oregon and from Minnesota to Mississippi -- this by accident rather than design. They were chosen by the chief of the Personnel Section, Mr. Russell Cook, on the basis of recommendation by deans of their colleges and personal interviews.

All of these boys brought with them records of their competency in electrical engineering. But for REA this competency in electrical engineering did not seem enough. Most of you are aware of those views, so often expressed by our Administrator, concerning the need of more socially-minded engineers, the need for engineers who in their estimates of costs and materials count in an estimate of human happiness.

It became apparent that this type of electrical engineer, or any engineer, is one of the rare individuals of this world.

The few individuals who have achieved this distinction have found it through the experience of years, as observers of the havocs and tensions in our civilization, created by our inability to match pace for pace our social development with our technological advance.

Believing the foregoing to be true, the Administrator and the staff of this organization saw the need for further training of these new young engineers for REA, which is a new type of Governmental organization. REA was created by the demand of the people of this country who have been deprived of civilization's greatest servant -- electricity -- by the greed and lack of social vision of the men who had come into power in the industry.

This organization demands for its continuance that its members be not only experts in technology but experts in

humanity, with the ability to integrate sanely and forthrightly, both the material and social elements of our project.

Technical school courses train men only in the skill necessary to achieve the material elements of a project. Education is needed to include the social ones -- education conceived as emancipation from herd opinion, as self mastery, as capacity for self criticism, suspended judgment, and urbanity -- education as a spiritual valuation of the human life.

How to design a plan of training to meet our needs and our philosophy has been a task, the success of which can be measured only at a later period of time. It would have been an insurmountable task but for the whole-hearted cooperation of the staff of this organization.

The plan of training adopted after consultation with you and after careful thought, is as follows:

By assignment to a job in a division, each apprentice engineer becomes acquainted with some part of REA.

It is suggested to the chiefs of divisions that an explanation of the relationship of this work to the work of the division be given, when possible, and that each apprentice engineer during his term of duty, which lasts approximately ten weeks, be given the opportunity to become acquainted with the practices, in general, of that division.

If you will visit Room 534 in the Investment Building any evening from 3:00 until 5:00 or 5:30, or sometimes 6:00, or if you will come around on Wednesday morning before 8:00 or if on Monday evening you will visit this same room at 7:30, you will find ten apprentice engineers seated around a table, listening, we hope always intently, while some member from the principal divisions of this organization explains the operation of his division, and the particular phase of the work in which he is a specialist.

The Administrator and the Deputy Administrator meet with these apprentice engineers. These meetings, or seminars as we call them -- preferring the higher-priced word -- are scheduled to include in their discussions all of the activities of REA, with the addition of discussions in the Monday evening and the Wednesday seminar of those historical, sociological, economic, and philosophical questions which seem most pertinent to an attempted understanding of our society.

The members of REA who meet with these boys adopt all the methodology and technics of the academic world, with which they are familiar.

That is, seminars partake of the lecture, laboratory, and case history type supplemented by prepared outlines, bibliographies, questions and summaries.

In collaboration with Miss Potts in the library a wide and selective reading list is available and, I might add, is used.

Our Monday evening meetings, at which all twenty boys are assembled, are open forums before which we may ask you as a member of this organization to appear and land a discussion.

This is the essence of our training program. It is an attempt to combine realistically those elements of the technicological accomplishment of REA with those elements of the philosophy of REA set up by the passage of the Act.

The accomplishment of this training program can be measured only in the future, but with your continued wholehearted cooperation, for which on behalf of the personnel department, I wish to thank you, we can say to the Administrator, "These apprentice engineers and this training program are your insurance for a continued socially-minded REA."

Thank you.

THE CHAIRMAN: Does anyone have a question to ask?

MR. ALLEN MOORE: It is not quite clear to me where these engineers are going to be used.

MR. CRAIG: I did not answer that question.

MR. BACON: Are they available to go outside?

MR. CRAIG: At present, no, but I do not wish to hedge. Let us put it this way: We are now in the formative period of our policy. Cardinal Newman in that old hymn "Lead Kindly Light" said, "One step enough for me". Just at present we are taking one step. These boys will be available, but for what purpose we shall have to wait until the growth of REA approaches a need for them. That is as definite as I can answer that question.

MR. ALLEN MOORE: It is very mystical.

MR. CRAIG: I intended it to be mystical, Mr. Moore, but the mystical things of this world are those which usually find accomplishment.

THE CHAIRMAN: You are now dealing in the realm of philosophy. (Laughter).

MR. CRAIG: I might say, Mr. Deputy Administrator, that this group believes as much in the spirit as in the Act.

MR. THAXTON: May I ask a question, Mr. Chairman?

THE CHAIRMAN: You may, indeed.

MR. THAXTON: Is it your plan to farm these men out with our borrowers, to see that they get some practical experience and get polished off, or have I spoken out of turn?

MR. CRAIG: Not at all. I might say that the plan of what might be done with these apprentice engineers will be decided by the Administrator and the staff, as the need for them arises. At present, to attempt to answer that question would be anticipating the future, and that is like trying to gauge the economic feasibility of a project twenty years from now. I am unable to read that far ahead.

THE CHAIRMAN: Do not go away. Mr. Cook, can you venture any more than Dr. Craig has been able to on this subject?

MR. RUSSELL COOK: I think he has handled it very nicely.

MR. CRAIG: Thank you, Mr. Cook. You are getting an expert on the job, Mr. Chairman.

THE CHAIRMAN: Do you want to say that this is still an experiment?

MR. COOK: Still an experiment?

THE CHAIRMAN: Yes.

MR. RUSSELL COOK: No, I should say not, for this reason: Each piece of work that these apprentice engineers are doing is something that has to be done by somebody somewhere, and if we did not have them on it, we should have to have

other persons doing the same things. In other words, if we took these twenty apprentice engineers out, we should have to have twenty other people in their places. Now we have twenty prospective engineers for any and all parts of the organization; they are learning and being trained and getting an REA point of view at the same time.

THE CHAIRMAN: Over how long a period does the training range?

MR. RUSSELL COOK: One year.

THE CHAIRMAN: One year. Nobody as yet has had that year's training?

MR. RUSSELL COOK: No, about seven months.

THE CHAIRMAN: Then you will know more about it at the end of a year or perhaps two years?

MR. RUSSELL COOK: You will know much more about it at the end of ten years.

THE CHAIRMAN: No, you will be in a bigger fog in ten years than you will be in two. This business of bringing college men into an organization and putting them through training is not new in this country. It has been done for many, many years. I suspect that practically no present executive of the Westinghouse Company, except Mr. Robertson, would feel at home unless he could say sometime that he used to take his meals at Smith's Boarding House across the street from the old Pennsylvania Station in Wilkinsburg, where I used to eat although I was not working for Westinghouse. That was a good many years ago when I was about the age of these young apprentice engineers.

It has been the practice of General Electric, as long as I can remember, to do the same thing. I think Mr. Winder is a product of that training.

All over the world I have met General Electric men and Westinghouse men who have gone through that training. Many of them remain with the firm a lifetime, and many of them with affiliates. Some go with customers of the company.

Bethlehem Steel Corporation has recruited its present sales force very largely through that process. It is hard to say just where men will go after training.

I suspect none of those men in any one of those companies which I mentioned, or in many others which I might mention, gets anywhere near the attention to the humanities that our men will get over a period of a year.

They are told the objectives of the company, the processes of manufacture, and all that sort of thing. There must be over a thousand men gathered from the colleges, in training of one kind or another, throughout the United States.

The standards of selection are beginning to change, too. The selection is based sometimes wholly on intellectual accomplishment, and sometimes on the all-round accomplishment such as we get in the selection of Rhodes scholars. Men must have demonstrated in their four years of school life not only ability to study the assignment and pass examinations, but they must show qualities of leadership in broad fields of human relations.

Take a young man who has no understanding of the humanities and start him out, and you have one thing; but take a boy who possesses qualities of leadership in a group, of balanced activities, athletics, the arts, etc., and you have a different sort of person.

We shall know more about the results a little later. I think it is well to remember what Russell Cook said, however, that these men are working, rotating at regular jobs, as they go along. If they were not on the job, doing certain kinds of clerical or drafting work, the work which the experienced executive ordinarily turns over to an assistant, then somebody else would be doing it, perhaps without the ultimate objective of participating in these activities on the managerial or engineering side, in the field of rural electrification.

I understand the film is here; Mr. E. J. Coil, who brought this film from Sweden, is not here this morning. I saw the film once. The script is Swedish, but I hope we may be able to see the significance of this plan.

This represents a functional barn, a barn designed specifically to do the job that must be done on the farm -- to make the farm operate effectively and economically. In the past people have just built barns. If they had a lot of neighbors and if lumber was cheap, they built a big barn. Otherwise they built a small barn; and barns are all

pretty much alike in this country, as you know, except in the dairy country.

However, in Sweden something happened. When the Government became interested in electrification, in getting more power for less money, they found that one of the things which they had to do was to teach people how to use electricity. A man connected with the enterprise, having vision and courage, decided that the thing to do was to build a barn as a factory would be built.

First you find out what you are going to make and find out the steps in the process of making the product; then you design your building and arrange your machinery so that you get the fewest waste motions. In other words, this really is an excellent example of the use of the process chart and the use of the motion study in industry.

If we had time today to go into the history of the development of scientific management we should find that Frederic Taylor, our own Administrator, Mr. Cooke, and others, had laid the foundation for this very barn, long ago. Only we have not thought of transplanting our experience from factory to farm as they have done in Sweden. Frank Gilbreth put in years trying to convince people that they could do more work with many fewer motions if they organized the work properly. To prove this he took the camera into the shop.

Then came the process chart, which is making great inroads into plant lay-out. For instance, the Cadillac Motor Company has spent thousands of dollars completely rearranging and reorganizing all of the production machinery on the basis of some inquiries that Mr. Morgensen, whom I had on my staff, prepared and presented to them. The same techniques have been taken into a great many enterprises; the Duponts are using them, and they are being used in the copper fabricating business and in hosts of places around the United States.

Colonel Babcock did this kind of thing in Syracuse and again in Peoria, and he did it overseas with the general headquarters handling materials.

I think it is one of the things which we who are talking about load building must get over to a great many people. Perhaps nobody will do it exactly like it is being done in Sweden, but we may begin to make some modifications to it.

What it amounts to is really building a little factory on the farm and saving so much money in the construction of this little factory over building the regular barn that farmers can afford to purchase all the electrical equipment they need in the barn out of this saving, as against building the normal barn and not having any electrical equipment in it.

They start out with the job, what they must do, what their daily tasks are, and build the barn around that.

It is very simple, but it takes a long time to make changes among traditionally-minded people who do things a certain way, because their grandfathers did them so.

Does anybody else know about this barn? Mr. Walters, you have seen it, or -- could you talk about our literature?

MR. WALTERS: I should be glad to.

THE CHAIRMAN: Suppose you do that for a minute while we are waiting, tell what you have been getting out and how people get it, whether by writing into the Correspondence Section, or whether you fellows want these field men to follow a different procedure.

I take it this way: While I think it is all right to have casual inquiries of our borrowers and our prospective borrowers go through our Correspondence Section, I should think our own field people, who are asking for information ought to get it as quickly as possible. Is that not true, Mr. Cook?

MR. RUSSELL COOK: Yes. All mail, however, goes through the Correspondence Section.

THE CHAIRMAN: How is that handled, Mrs. Harfield?

MRS. HARFIELD: It is routed to the section which can send the information requested. General inquiries are handled in the Correspondence Section, if possible. If it is something which we think we cannot handle, we refer it to the proper section, but when an inquiry comes in from a member of the field staff, it is routed to his chief, who sees, of course, that he receives the desired material.

THE CHAIRMAN: How long does it take, a day or two days, to go through, or is it likely to go to that place the same day?

MRS. HARFIELD: It goes out the same day. We receive mail twice daily. The greater part of that which is received at 8:15 a. m. is routed from the Correspondence Section before noon. There is a second mail which comes in around noon and that is sent out of the Correspondence Section just as quickly as possible the same day.

MR. WALTERS: I do not know whether it is Mrs. Harfield's fault, but mail coming in the morning reaches us before noon, and mail coming in the afternoon reaches us between four-thirty and five, when all official business is done.

THE CHAIRMAN: Cannot the mail be handled the same day?

MR. WALTERS: It should be handled the same afternoon.

THE CHAIRMAN: You do not get it the same afternoon?

MR. WALTERS: No.

THE CHAIRMAN: But you must let it go over?

MR. WALTERS: Yes, we must let it go over.

THE CHAIRMAN: I try to get my desk cleared about 4:30 p. m., and every time I look up there is more on it than in the morning. I wondered what was the matter. It just piles up at night, apparently from nowhere. It comes not from outside but inside; it is from these men who are here this morning, and it would have been coming in today if you were not all here.

MR. WALTERS: I want to talk about pamphlets.

THE CHAIRMAN: Miss Taylor, do you have a question?

MISS TAYLOR: I have a suggestion which I should like to make. When I am out in the field, I think I find too few pamphlets on what the REA is, and how you can get electric service by borrowing from the REA. I have forgotten the name of the pamphlet.

THE CHAIRMAN: At what places do you find too few?

MISS TAYLOR: For instance, I should like to see that material in the hands of the extension specialists. That is the place, if it is possible, from which to send it out to farmers.

We have a lot of people on our mailing list, but they do not seem to be getting that particular pamphlet. Sometimes, when I am visiting even where we have projects, I do not find those pamphlets. I usually take an extra bunch with me and place them where I think they will be most needed.

THE CHAIRMAN: Mr. Walters.

MR. WALTERS: Answering that: Pamphlets are given to home demonstration agents, county agents, and to the field men, too.

THE CHAIRMAN: Directly to them in their counties?

MR. WALTERS: Directly to them in their counties by mail. We cannot be mailing the same pamphlet over and over again. We make them available, and if they throw them away, we cannot help it. We cannot make people read the booklets, we can only make them attractive enough that they will want to read them.

Mr. Bacon has a habit of taking pamphlets and leaving one here and there. He is doing good public relations work.

THE CHAIRMAN: I also take some with me, no matter where I go in the field, assuming that perhaps people do not have them currently on their desk, and that they should be made available.

MR. THAXTON: Mr. Walters, I should like to ask a question. In your original distribution of pamphlets, booklets, and literature of all kinds, do you send along a self-addressed requisition, by which the party receiving it can know the name and number of the pamphlet which he needs?

MR. WALTERS: Not with all of them, but once in a while. Sending them in quantities to county agents would encroach a bit on the Department of Agriculture, which we are very careful not to do, and which they have been careful not to have us do.

The county agents who are alert and who are interested in the program, of course, write in for them. We have felt that we could not legitimately encourage them directly to write in for more pamphlets. We do indirectly, in every way that we can.

MR. THAYTON: I think Miss Taylor hit upon the same thing that I did before, and that is that the very people who should have the literature do not have it, because it has gone into the pigeonhole, or is under a stack of mail or some other place on the desk.

MR. WALTERS: We can make it available to them but, again, we cannot make them read it.

THE CHAIRMAN: That sort of literature is a good deal like the magazines which come to people's desks; they are going to read them sometime. That is why people who travel in the field ought to take with them not a great trunk full of these pamphlets, but a sufficient number to leave one here and there with people who they are sure are interested and who should read these important pieces of literature. This is something which must constantly be stressed: You cannot saturate anybody by a single distribution of anything, whether it be a pamphlet, a magazine or a newspaper or whatnot; they must be sent again and again.

MISS TAYLOR: I find they are receiving the monthly Rural Electrification News and reading it. I am surprised at the number of people who tell me they read this little magazine.

There is another little bulletin called "More Power to the Farmer", or something like that; I should like to see that sent to the extension specialists at the colleges.

THE CHAIRMAN: As one editor to another, I am going to make a suggestion to Mr. Walters. I was an editor in competitive business, where first of all we had to get people to pay the circulation price, and then get them to read our paper in competition with a host of other magazines and papers which they thought they wanted to read more than ours. We were not terribly successful, but we found that there was one thing which would help which some other magazine editors learned long ago, namely a serial. In other words, if you could take the contents of one of your really important pamphlets and serialize it, then run it in the News, putting in perhaps a page in one issue and continuing it in the next number then the man reading your News will have your pamphlet, although he did not read it in pamphlet form.

That is from one editor to another, and I charge no consultation fee for the idea.

MR. WALTERS: I do not think you realize it, but the News carries questions and answers which duplicate to some extent the material

in our earlier pamphlets.

THE CHAIRMAN: Maybe if you do that, it does not matter whether they read the pamphlets.

MR. WALTERS: It does. We want them to read the pamphlets, too.

THE CHAIRMAN: They will begin to think it is this "accumulated hash". We can talk about that a long time.

(At this point the film relating to the Model Swedish Electric Farm was shown.)

THE CHAIRMAN: Somebody asked this morning about these films which Utilization or Information has sent out to help people understand the application of electricity. There are two short films about which they wanted to know. They will be shown immediately, and then we shall recess for a few minutes.

MR. PHILLIPS: The two films which we are going to show you are the first of what we hope will be a series of REA strips. The first is on electricity in general; the second is a trip to Rosedale; a third is being prepared. Each trip has a set of lecture notes, and the idea is that while the film is being shown someone will read the lecture notes. Mr. Gilson has kindly consented to read the lecture notes for these two strips.

The photographs which you will see are from our own files. We have taken most of them. I am sure many of you are amateur photographers, or past that point. We should be very grateful when you have taken photographs in the field, if you would send them to us. We need more and more photographs.

THE CHAIRMAN: I should like to supplement that by saying, if you do send them, identify them as accurately as possible. We have gotten ourselves into difficulty, assuming that photographs were taken at a certain place on a certain property when they were taken at a different place.

The exact description should tell what it is, so that it will not run wild in our files.

MR. PHILLIPS: Identify the people shown with names and so forth.

THE CHAIRMAN: And tell where the project is, what the picture's relation to the project is, etc.

MR. PHILLIPS: These strips are furnished by the L. E. Davidson Picture Service, which manufactures them for us; they are sold for fifty-five cents each. The strips were announced in the January News, a page being devoted to that subject; and we have had the page reprinted.

Our thought was to send out the reprints to county agents and to other people who might be interested in buying the strips and in showing them. I have brought down a supply of the reprints, and they will be outside, if you should like to have the address of the Davidson Picture Service.

(The two short films produced by REA, above referred to, were shown at this point.)

THE CHAIRMAN: Mr. Walters is afraid that not enough people picked up this reprint from the News entitled "REA Film Strips Now Available". I am sorry to say that I did not hear Mr. Phillips say they were available outside, although he did say it. In case you did not hear him, let me repeat that I think it is worth while to put one in your pocket and look over the information contained therein. Perhaps you will be able to distribute some of them.

Mr. Marion will now explain the use of the manual, what he means by the manual, what is in the manual, how it is gathered, and what the purpose of the manual is.

Mr. Marion, of Accounting and Finance.

MR. MARION: Mr. Carmody, ladies and gentlemen: The borrower's manual, as we call it, originated at a conference held in the Administrator's office nearly a year ago. Certain matters of importance which were discussed gave rise to the thought that there must be many subjects which could be put in writing and assembled under one set of covers. These assembled data would become a manual, which could be sent out to borrowers.

This idea was not in any manner a product of the Finance Section, but the task was assigned to us because the subject was presented while a representative of this section happened to be present.

We have endeavored to collect all the data from various sections and divisions of REA, which might ordinarily be sent out piece-meal to the borrower. If the borrower did not have a satisfactory place to safely retain information of a valuable nature such as memoranda, instructions and so forth, this information would lie around and be snowed under here and there and could not be found at the time it was needed. The idea of the loose-leaf binder evolved from that. We have collected a fair amount of data from the divisions and sections of REA which felt that they had something to contribute. One possible drawback is that we did not take in the period of development; we had intended to send out the manual at the time that the Loan Contract was signed, the reason for that being that the building up of the manual required some time and investigation, as well as considerable expense. Therefore, we thought it would be more prudent and logical to send it out at a time when we had a definite organization with which to deal.

Now, as to the character of the information contained in the binder, we have, first of all, the Accounting Manual, which, as you know, consists of a chart of accounts, an explanation of what the accounts mean, and what should be charged to them.

Next in order we have copies of invoice and other forms that the borrower will need in the operation of his business.

Explanations have been prepared in each instance showing how the forms are to be used, what the purpose is, and so forth.

Another form recently added refers to the building up of a budget. Each borrower has been asked to make an estimate of what his gross income will be, and what his expenditures will amount to, broken down under a few general captions, so that he would have some kind of yardstick with which to guide his business. We are asking that this be done very early so that he will become budget-minded and in that way limit has expenses to conform with his revenues. The budget will act as a barometer and prevent tendencies to create operating deficits.

We have also prepared for the manual a glossary which consists principally of words and terms taken from the Accounting Manual. There are numerous terms which are entirely new to the borrower and which he would like to have

explained. Furthermore, the glossary will, we hope, standardize the meaning of terms used so that a word used in New England will be interpreted in the same manner in Texas. This will also help the auditors materially because it will contribute to uniformity in the distribution of items to the different classifications and in accounting procedures.

Now, I have told you how the manual originated and what it contains; we are hoping that it will act as one of the avenues for coordinating efforts of REA and the borrowers concerned, and also act as an aid in clarifying some of the REA policies.

The manual has been assembled in what we think is an attractive form. It is so arranged that when the data become obsolete, old sheets can be removed and new sheets inserted to replace them. It is intended, of course, to furnish those who have manuals with any new or revised sheets.

That in brief is about the story.

THE CHAIRMAN: Just stay there, Mr. Marion, please. Can we hold this up, or have you done that? This binder is the one that will be supplied to the borrower.

(Exhibiting binder)

MR. MARION: To the borrower.

THE CHAIRMAN: It is a standard binder. Is it flexible and can it be expanded?

MR. MARION: It can be expanded.

THE CHAIRMAN: Can it be expanded sufficiently to take care of perhaps a year's releases?

MR. MARION: Yes, sir.

THE CHAIRMAN: With an index, miscellaneous instruction and utilization, legal, engineering, development, and accounting information.

Here are instructions that the average borrower can understand, if he will study them, and can understand better when they are explained to him by the auditors who, in the normal course of business, will be visiting the project anyway.

MR. MARION: Yes, sir.

THE CHAIRMAN: We are looking toward the standardization of accounting too, are we not?

MR. MARION: That is right.

THE CHAIRMAN: So that the comparisons may be really comparisons.

When do you plan to send out this manual, assuming that you get in it all the information which you think you can get at a certain time? Are you prepared to send it out when the borrower is organizing?

MR. MARION: Right after the contract is signed.

THE CHAIRMAN: After the loan contract is signed?

MR. MARION: After the loan contract is signed.

THE CHAIRMAN: It is then an organization, and you have an organization to deal with?

MR. MARION: That is right.

THE CHAIRMAN: This will be a growth. It must grow.

MR. MARION: That is right.

THE CHAIRMAN: And there must go in it from time to time bits of information that do not originate in your department?

MR. MARION: Absolutely.

THE CHAIRMAN: Are you suggesting that the data that the Legal Division would recommend be incorporated here, be cleared through you or sent directly to the borrower, letting the borrower incorporate such things in the manual?

MR. MARION: My answer to the first part of the question is that we do ask, and have asked, after explaining to them our object, the various divisions to furnish the data that they feel will be proper information for the borrower.

Subsequently, we propose to ask the borrowers if they have any suggestions after going over this manual, as to the additional information which might be added.

THE CHAIRMAN: Do you not think each division should have a master copy, so that it knows what has gone out, for the specific purpose of being incorporated in the manual? In other words, the Legal Division will ask the borrower to put certain things in the manual for reasons which they may have.

MR. MARION: Yes, sir.

THE CHAIRMAN: If each division has a master copy, and it is kept up to date, then each one of them will know what the other one is doing, because there should not be anything in this manual of a legal nature which is not only approved by but recommended to be put in the manual by the Legal Division. The same thing is true with respect to the Utilization Section and the Engineering Division, etc. As to Accounting, you will take care of that yourselves.

Let us make a note of that, Miss Blades, so that it can be arranged inside in such fashion as not to bring about conflict and not to have something in the manual that the responsible division would not want to have in there.

MR. MARION: The idea of building up a manual is by no means new, as you all know. It is an old story. In commercial lines I scarcely know of a large corporation which does not have a manual of some sort. I know in the automobile business they have manuals, plenty of them, and I also know that the Chrysler Corporation, the Ford Motor Company, General Motors, and all of the very large businesses have them.

THE CHAIRMAN: You do not have to defend it. It is an accepted practice.

MR. MARION: Yes, sir.

THE CHAIRMAN: And more than ever necessary in an organization like this, which may be dealing with three, four or five hundred separate borrowers.

MR. MARION: In the Government service there are several manuals, like that of the Department of Agriculture, Home Owners Loan Corporation and the Farm Loan Bank. I am not trying to defend it, but to show that the idea is well founded.

THE CHAIRMAN: Very well.

MR. MARION: That is all I have to say.

MR. LONG: Are any of these available to anybody besides the borrowers? I mean are they available to the field men?

MR. MARION: They will be.

THE CHAIRMAN: They ought to be available at the same time I should think, and each field man should have one.

MR. BACON: Is there any period between the allotment and the contract covered there?

MR. MARION: Between the signing of the loan contract?

MR. McALWEE: At present the manual covers the period after the contract is signed?

MR. LEVERETTE: It is a systematic method of assembling information for the borrower. When the auditor gets on the ground, it is about the only method which he will have of getting a general review of everything. He is left, in a sense, the final word of review as to legal contracts, this, that and the other thing, and all these instructions which go out to the borrowers, if they assemble them in a systematic order, will contain the information for him to review.

THE CHAIRMAN: The most difficult thing about it, apart from assembling it originally, is to keep it up to date and keep the dead leaves out and the live leaves in, so that you are not dealing with misinformation. Everybody who has ever dealt with any such thing knows that is the most difficult problem.

MR. FREEMAN: Mr. Marion, in trying to get the borrower to set up a budget, I should like to ask whether we assist the borrower in setting up a budget commensurate with the size of the project?

MR. MARION: Absolutely. First, we send out the forms with the necessary instructions; we follow that up as soon as we can by sending out one of the auditors who makes it a point to assist the borrower in setting up a budget.

THE CHAIRMAN: That is only a partial answer. The real answer to your question, Mr. Freeman, is that we have not arrived at that stage in our development. When I use the word "development" I do not mean the Development Division. That is a thing which we hope to discuss this afternoon. It will be a part of Mr. Herring's discussion, I think. None of us, I believe, knows now how much to set up for operation of the various sized projects. Obviously, they cannot judge their ability to pay a manager on the basis of their income at the moment; there must be another basis for judging that.

For instance, here is Idaho-4-Bonner, a project which as set up cannot afford a manager on the basis of its present income, and yet it if cannot afford to have one it will be ruined.

So it is with Indiana-6-Boone. Is not that true? Miss Harris can you answer that?

MISS HARRIS: Yes, sir.

THE CHAIRMAN: That is true, is it not?

MISS HARRIS: Absolutely.

THE CHAIRMAN: All right.

We are really in the process of determining what should be a wise budget for these operations.

MR. FREEMAN: I have one further question to ask. At the time that the feasibility of the project is set up, Mr. Winder makes an estimate for the overhead. I do not know that Mr. Winder breaks that down into detail, but I am wondering whether in setting up the budget those figures are used as a check to see that the budget, which is being set up, is not in excess of the amount which it has been estimated that the overhead would be.

MR. PYLES: The question which I am going to raise probably will not be answered until a later discussion: It is the question of management and the appointment of a manager. If it is decided that the manager should be appointed immediately upon allocation, I wonder if that is not the proper time to send out the manual of instructions, Mr. Chairman -- complete as to how to proceed with the formation of the corporation and what has to be done before the signing of the loan contract.

THE CHAIRMAN: Yes, sir, it would be. Will you be sure to raise that question when we discuss the matter this afternoon?

MR. NICHOLSON: I should like to say a word about these legal forms which Mr. Marion mentioned, which are chiefly involved in the question which Mr. Pyles raised. Most of them do not lend themselves to uniform treatment all over the country. There is not even uniform treatment within a given State. The forms are rather numerous, as follows: articles of incorporation and the by-laws; the resolutions for the meetings of the members and the stockholders in authorization of

the signing of the loan agreement; notices of meetings, waivers of notice; further resolutions when they come to execute the note or the bonds and the mortgage; forms of service contract, forms of easements, other forms of contracts with engineers, with statewide corporations, and for wholesale power contracts, etc.

I have not given an exhaustive list, but those are the usual documents which we have to prepare.

Now, these vary widely with different States, and even in a given State they may vary, because very often these documents, particularly some of the resolutions, as well as some of the contracts, have to be prepared with particular reference to the local situation, which may vary as between one project and another.

Therefore, we have not found it feasible to put into the manual the various documents that might be standardized because it might become very confusing. We would have an inadequate set of legal documents in the manual, whereas the thing which the borrower's attorney wants is to get for his use a complete set of documents and a complete letter of instructions.

So that although there are a few documents which can be standardized within a given State, and some of them, such as the contract for electric service might even be standardized for the whole country, it has not seemed feasible to us to have just a few documents, which usually are the less important documents standardized for the purpose of this uniform manual. We prefer to include them along with the documents which cannot be standardized, in the letters of instruction and the brochures of documents which we have to send out to the borrower's attorney.

THE CHAIRMAN: If you have a manual and depend upon it for very much, you must put in the manual a statement as to what kinds of information cannot be standardized and tell the people; "For such kinds of information, write directly to the Legal Division."

MR. PYLES: That is the point I have in mind.

THE CHAIRMAN: They can only get it by writing to the Legal Division.

MAJOR WERTH: Mr. Marion, are one or more copies of this available in the library for the use of student engineers

and others here? If you want to have a best seller, I suppose you want copies of it read by the largest number of people. I would suggest that you place at least two copies in the library.

THE CHAIRMAN: Thank you.

MR. CAVANAUGH: Mr. Chairman, my understanding is that this manual will act as an almanac, not particularly covering matters that the Legal Division or the Engineering Division have affecting a project, but it is going to give all the hard and fast rules which we have been able to set up. It tells accounting practices; our borrowers have a ready reference guide there, and they can go to that. If we start putting in everything affecting a project during the period from allocation until the contract is signed, we shall have the issue so beclouded that the manual will lose its value. If we could keep it as an almanac, and keep it exclusively for that use, they will have a guide to follow. Any other section with information -- Utilization principally -- can supply standardized data which will fit into the document and complete it.

THE CHAIRMAN: Are there any more questions?

MR. McALWEE: Yes, sir.

THE CHAIRMAN: Mr. McAlwee.

MR. McALWEE: The observation which I was going to make, Mr. Carmody, was with regard to the sort of instructions which we put into a manual. We are all salesmen trying to sell a job. Development men go out and promote the job and Boyd Fisher develops it, Mr. Nicholson and the Legal Division pass on the legality, the Engineers design the lines and see that they are built, and Mr. Marion's organization comes along and audits the accounts. So, we are trying to sell a job, and this manual is to help us sell it.

THE CHAIRMAN: Sell it to whom, Mr. McAlwee?

MR. McALWEE: Sell it to the rural citizens of the United States, the people to whom we are trying to give electric service.

THE CHAIRMAN: To the borrower.

MR. McALWEE: Yes sir. To the borrower who is the official representative of those individuals. When we try to sell

this job, we cannot put into the manual all the details that go with our individual jobs, because when we try to teach a small child something, we do not go into all the details as to what kind of material was used to make the stove, and what kind of fuel is in it that makes it hot. We merely say: "Don't touch the stove because you will get burned."

That is the kind of instructions which we can safely put in the manual. If we cannot submit something positive, give us negative instructions and say to the borrower, "Don't do this because you will break a rule and you will make it necessary for us to spend six more months getting this project in shape for construction" -- "don't do this and don't do that."

That is the kind of information which we should like to have in the manual to make it effective. We know we cannot clutter it up with all the details which might go into it, but if you can say to the borrower, "Since it is necessary for you to have the right kind of engineer, and the right kind of lawyer or manager, and you have little or no experience in this field, please submit to us the things about which you do not know at a time when we can serve you. This will save you time and money." I think that the manual will serve a very good purpose in the organization, because after all it should be and will be a good manual. Now since the borrower becomes an associate member of our organization he is really like the dealer selling the automobiles about which Mr. Carmody was talking.

We are the manufacturer or distributor offering the product, and he is the dealer. He does not know anything about the merits of our product or the methods to follow to attain success; it is because we did not tell him our story. I think most of us will concede that it is a new business to him, newer to him than to us.

Most of us at this conference have learned much that we did not know before about REA. As a rule we do not know what the other fellow is doing; most of them keep their business to themselves; they think their particular function is a secret. There should not be any secret about REA.

For some reason or another we have not coordinated our efforts. Development has not, Legal has not, and some of the other departments have not to the extent that would be readily expected.

The men on the road are the ones asking the most questions. Why do they ask them? Because they have a problem with the sponsor or borrower. He is asking the field men questions that they do not know how to answer. They come back here and someone is afraid to give them the answers.

THE CHAIRMAN: Is that true?

ANSWER: Yes.

MR. McALWEE: You are out in the field, you are the REA in the field. There is not anything about the job that you should not know. Everyone knows that technically we may be better fitted as lawyers, engineers, accountants, or auditors; however, some of us cannot sing, but we do know when someone sings well, and we are able to say, "This or that party is a singer of note -- the man or woman to get in touch with if we want good singing."

That is the point I am trying to put over. If we put into this manual negative instructions, where we have failed to put in positive ones, we will have done a good job.

(Applause)

THE CHAIRMAN: We might go to the War Department and find out how they use their manuals in running the army.

Mr. Johnston.

MR. JOHNSTON: I should like to ask Mr. Marion a sort of double-barrelled question. The first is, when does the borrower become the responsible disburser of the funds he borrows?, and the second - -

THE CHAIRMAN: Let him answer that first question before you propound the second one.

MR. JOHNSTON: The other ties in with the first question.

THE CHAIRMAN: Is it so close that he cannot answer a first question?

MR. JOHNSTON: They are twins.

THE CHAIRMAN: Siamese? If they are Siamese twins, we shall have both questions.

MR. JOHNSTON: Yes -- Siamese twins. The twin question is, when the moment comes that the borrower is the responsible disburser of his funds, is he kept directly informed of everything connected with the finances? That is, does he know what every dollar that he has borrowed is being spent for and when it is being spent?

THE CHAIRMAN: The first question is, when does he become the actual and official borrower, or as the borrower, when does he get the right to disburse funds? When he does, what does he know about the disbursements?

MR. MARION: That part of the question itself is a sort of double-barrelled question, because if the borrower obligates himself for merchandise purchased and labor that has been utilized, and wants a reimbursement, that question is not so easily answered at that point.

If he tries to get money for the purpose of taking care of expenditures to be made, then the moment that he receives advances from REA through the Treasury Department, he becomes a disburser of those funds.

THE CHAIRMAN: Do you mean to say that there comes a time in his contractual relationship with REA when he is entitled to REA funds?

MR. MARION: Yes, sir.

THE CHAIRMAN: That may be when his request for his first advance is approved, goes through all the machinery here, and passes through the Treasury, that is one thing?

MR. MARION: That is one thing.

THE CHAIRMAN: But are you also trying to say that he may have obligated some of those funds, and did obligate some of those funds, before he got them in his hands?

In other words, there could be no occasion to disburse most of the funds under the first request unless they have been obligated. Some work must have been done for which it is proper to pay REA funds before the request can be made. Is that what you were saying?

MR. MARION: That is just what I mean.

THE CHAIRMAN: Is that true, Mr. Nicholson?

MR. NICHOLSON: I might say, to supplement what has been said, that the terms of the agreement between the borrower and the United States govern the question which Mr. Johnston asked.

We make advances, so-called, which means just what it says. We spend the money to take care of their future needs. The borrower sends a statement of what it expects to do with the money and we pass upon that. If we approve the statement in toto, then that becomes the charter of its use of that particular disbursement from the Government, and it can use the money for the purposes set forth in its statement of purposes, and for no other.

Very often we have to have some items reduced -- reduce them in amount or eliminate them altogether -- because the borrower has included items which cannot be paid for out of Government funds. Those are usually not large in amount but sometimes they are troublesome in character.

Then the requisition which we sent to the Treasury is adjusted according to the items which we can approve. The borrower gives an accounting of what it has done with the funds which were last sent. Our auditors have to check that accounting with the statement which we sent, to see whether or not the borrower has made any improper disbursements. If the borrower has made any improper disbursements, the borrower is charged with those items and they are deducted from the next requisition, so that ultimately when the project is completed, the borrower will have obtained just enough money to take care of those items of expense which we have approved.

If the borrower has used any of our disbursements for funds which we have not approved, toward the end of the project, the borrower will simply run out of money and will not have enough to complete the job.

Does that make clear what you had in mind, Mr. Johnston?

MR. JOHNSTON: That answers it in part, but I think what I am particularly interested in is to know whether or not the borrower or the engineer on the job, or the lawyer on the job, is the person with whom our accounting division deals; and, if we do deal directly with the engineer, does the borrower always receive a copy of just what the engineer gets, so that the borrower throughout the transaction may have a really intelligent understanding of the operation before it actually is completed?

MR. NICHOLSON: The borrower is a corporation, and a corporation acts only through agents and representatives. The engineer, the treasurer and the manager are all representatives of the borrower, so that if any representative gets any information, then the borrower getsit.

How many representatives of a given borrower want and ought to have this information, of course, is another question. Usually the treasurer draws the checks with some provision for counter signature. I take it that our auditor usually deals with the treasurer, but it is a matter for local decision, I suppose, as to what representatives of the borrowing corporation are entitled to obtain the information and instructions which we send out. Sometimes they might go to more than one man.

THE CHAIRMAN: There is no standard practice. It depends on how the organization is set up and upon the people in the organization. In some cases they cannot do it without a meeting of the board of directors if it is agreed that it should be obtained in that way. That has happened on some projects. Some others they meet less frequently, perhaps, once a month.

The auditing department deals with a set of books and the people who are responsible under the contract and who are required under the contract to sign certain releases also. Is not that true?

MR. MARION: That is correct.

MR. JOHNSTON: Somebody directly representing the borrower -- and I think the engineer or lawyer would only indirectly represent him -- and somebody representing the borrower, like the manager or the president, would be kept informed of all transactions in the expenditures of the borrowed funds?

THE CHAIRMAN: Usually there is a meeting of the board about the time that the auditors get there, Mr. Johnston, in actual practice. My own observation in the field has been that as far as they are able to keep the books properly, the books are available to all the responsible officers who want to see them.

MR. McALWEE: There is not any instance where the engineer or the lawyer disburses any funds from REA. There is someone authorized by the corporation to disburse those funds, and a report is made to the board of directors covering those disbursements.

THE CHAIRMAN: I have happened to sit in when some of these disbursements were being made, and it varies in different corporations. Many corporations are run without the stockholders having the faintest idea of what is going on, and other corporations are run with the stockholders having full knowledge of what is being done.

MR. SARLE: I wonder if this will clarify it: Since most of the requisitions for funds are to pay the contractor for the work which he has to do, the representative of the contractor and the representative of the engineer get together and make up the application for funds. But that must be signed by the president and secretary or treasurer of the organization, who send it in to Washington for the Government funds. Does that help you?

THE CHAIRMAN: If it does not, I think you ought to sit down and talk about it with the auditing department, Mr. Johnston.

Mr. Cockrill.

MR. COCKRILL: I want to say for Mr. Johnston's information that each voucher or requisition is supported by a certificate from the treasurer of the corporation, stating the amount of the funds which have been received and the amount of money previously advanced. I think that is evidence of the fact that the corporation knows about it.

THE CHAIRMAN: I think so.

MR. MARION: I want to add this one remark, Mr. Carmody: The borrower, who of course should be very much interested in knowing how things are going from the standpoint of records, has every opportunity to find out what is going on and to supplement that when our men are in the field.

One of the specific things which they do is to make the borrower absolutely acquainted with every phase and factor of the transaction, so that he not only has knowledge of what has taken place, but he has the benefit of the comparisons, percentages and everything else.

Does that help?

THE CHAIRMAN: I think so.

MR. SARLE: I wonder if it has been clarified as to whether this manual has been released by REA. Can anyone answer that?

THE CHAIRMAN: What is the answer?

MR. MARION: It has not been released. We are hoping to release copies soon, maybe in six weeks.

THE CHAIRMAN: Are there any other questions on the manual or accounting procedure?

MR. PACKEL: I have a question as to general accounting procedure. I do not know whether it interests many of us. Of course our loans are amortized, and in a sense that takes care of depreciation, but what do you tell the borrowers in setting up their books as to depreciation. I am wondering what you tell them, or do you just ignore it, in view of the amortization?

MR. MARION: We do not talk depreciation at all. We try to handle it through maintenance.

THE CHAIRMAN: We have been promising you, Mr. Herring, all morning, but we have decided to listen to you this afternoon. How would it be if we recessed now and resumed at one-fifteen, then we could go through the various subjects in which you are interested, and which we cannot very well discuss until you participate in them?

MR. HERRING: Yes, sir.

THE CHAIRMAN: We will recess until 1:15 this afternoon.

(Thereupon a recess was taken at 12:15 o'clock until 1:15 of the same day.)

AFTERNOON SESSION

THE CHAIRMAN: This afternoon we shall learn from Mr. Nicholson and Mr. Herring and perhaps Mr. Swanson, what specific items may be paid for. There is a minimum covering it, but there is still some doubt in some people's minds as to what may be paid for; that will be number one.

We shall go immediately to this subject "What May Be Paid For."

MR. NICHOLSON: Mr. O'Callaghan has asked that I speak for him because a matter seems to require his attention this afternoon and he did not expect to have the conference run over to this afternoon. The items which can be included as a part of the cost of the project financed with Government funds are variable. By reference two documents -- first, the Act, under which we operate, and secondly, the Loan Agreement drawn pursuant to that Act -- I think I can very quickly make clear the general scheme by which all questions of this sort can be answered. The problem runs out into great detail and certain specific items are sometimes so close to the line one way or the other that I think there would be no profit at all in discussing these details, except for illustrative purposes.

First, the Act under which we operate provides for the making of loans for the construction of electric lines, and generating plants in rural areas. The word "construction" is the key-word for the purpose of our present discussion and, obviously, it must be reasonably interpreted. It does not mean the mere matter of physical construction of the lines, nor is it limited to labor, only. It obviously includes material for the line. The Comptroller General's office has told me informally that we can even include the cost of land in a small amount necessary for the erection of a substation. We have interpreted the word -- and I am quite sure it is a proper interpretation -- to include everything that is necessary to bring the project into being. When Congress spoke of the construction of a line, that meant the bringing into being of an electric line, including all expenditure necessary for that purpose. Coming down to the Loan Agreement, which defines precisely the agreement between the parties. The present language of our agreement now being used is this: "The term 'cost of the Project', herein, shall be deemed to mean the reasonable actual expenses incurred by the Borrower, for the performance of its obligations under this agreement and in connection with all acts of the Borrower necessarily prerequisite to this agreement, the reasonableness of all such expenses to be subject to the approval of the Administrator." That is a little broader than the terms of some of our earlier agreements.

Most of the earlier agreements define the cost of the project in terms of actual out-of-pocket expenses for labor and material plus a certain amount for overhead items. These were described in one way or another. Overhead included such matters as engineering, legal expense, customers' surveys and the like.

The language of our present agreement is about as broad as it could be made and yet come within the bounds of a contractual provision. The key words in our present contract are these: "The reasonable expense necessary for the performance of the borrower's obligation." The chief obligation of the borrower is to build a system of a certain character as described in the agreement and definitely determined by subsequent plans, maps, etc. The borrower also has the obligation to create a legal obligation to the Government and establish its legal right to operate the project. The borrower must obtain necessary authorizations from public bodies as may be required under State law, must obtain easements, must arrange for a source of wholesale energy, and must conduct its corporate procedure in accordance with the law. Everything which the borrower has to do in order to fulfill these requirements may be financed as part of the cost of the project.

By the same token, nothing else than that can be financed. You will note that the agreement also provides that we can and shall finance everything necessarily prerequisite to the agreement. Now, that was put in to make assurance doubly sure in cases where the borrower wants us to finance the cost of incorporation, including filing fee, advertising, lawyer's fee, etc. It is my opinion that those items could be financed under our earlier forms of agreement as being necessary to bring the project into being, but the present form of agreement makes it expressly clear.

Finally, there is probably a question in your mind as to what cannot be financed. There is no line that can be drawn with precision. There is a sort of "no man's land" where some items might be judged by one man to be within this agreement and by another man to be outside the agreement. We just have to reach what in our opinion is the best decision after collaboration of the accountants, engineers and lawyers. Now, generally speaking, the preliminary expense necessary to prepare the application for the loan cannot be included. Such items are certainly not obligations which the borrower must perform under the agreement and neither are these matters prerequisite to the agreement in the sense that they are necessarily related to it. The work that goes into preliminary surveys and accounting, holding meetings and talking to farmers might cost a lot of money and might be worth a lot of money but all that has to do with promotion and the application for the loan cannot be financed with Government funds.

No loan comes into being until the Administrator has made an allotment. Some of this preliminary work can later be financed if it has continuing value in connection with the project. The customers' survey, once made, if it has value for later purposes in connection with estimates and layouts under the loan agreement, does not have to be made over again. Just as materials made five years ago can be used in the project, so surveys or maps necessary under the agreement can also be used and financed regardless of the time when they were made. However, only such items as have continuing value in connection with the project can be financed. Trips to Washington in support of the application, mass meetings and the like fall outside the terms of this agreement.

Now, going to the other end of the process, matters that pertain to operation of the completed project fall outside this agreement. We have power under our Act to finance the operation of projects and we could supply working capital if the Government wants to do so. However, to date, the policy of the Administrator has not been to furnish money for anything more than the cost of the lines, so the borrower cannot buy materials in large quantities to be used for future maintenance. A small amount of material, of course, can be carried over. We cannot expect the borrower to estimate to the penny exactly what is going to be needed by the time the project is completed. We must apply the rule of reason. I think I have covered the essential outline of the subject. I have done it hastily, I know, but I shall try to answer any questions that are in your minds.

I have prepared a statement affirmed by Mr. Carmody and Mr. Herring embodying what I have just said and a great deal more; it goes into some detail in applying the general principle I have discussed to specific items. This is now in use for the people of REA who are interested in this problem. I see no reason why it should not be available to all departments. Anyone in REA, I think, should be entitled to have this for his guidance, but it is more or less confidential and not for the public.

MR. FALKENWALD: Mr. Nicholson, if an engineer, working for an engineering fee on the basis of three percent, comes to Washington for the purpose of drawing up plans and specifications, how does he pay for this trip?

MR. NICHOLSON: If he is employed on a fee basis, it is all charged to his fee.

MR. HERRING: There is no necessity for his coming to Washington if he has complied with the instructions he has received.

THE CHAIRMAN: I believe it would be very good if each one came to Washington before he made a move. The most satisfactory projects I have encountered in the field were projects on which the engineer or lawyer, or both, came to Washington. They learned what we wanted. They got an entirely new conception of what the problems are. Unless they come in, or we go to them at the outset interminable correspondence ensues, resulting in delay and friction.

MR HERRING: If we do that it means an increase of personnel, because otherwise we cannot take care of them.

THE CHAIRMAN: I think we waste a great deal of time trying to find out what these fellows mean. I cannot believe that we could not save time, money, friction and everything else by having a very definite understanding around the table when the job starts.

MR. LONG: The experience I have had with engineers and lawyers out in the field was, that after they made a trip to Washington they openly stated that if they had made that trip before they would have gained much more than by correspondence back and forth.

THE CHAIRMAN: I cannot believe anything else. Ultimately they have to come here; if they don't, there is something wrong with their projects. If we don't have regional offices, we have to do something else.

MR. HERRING: We furnish them with complete sets of plans and specifications. Any engineer who knows his business can follow the plans and write his specifications. All he has to do is to fill in the figures. Competent men in the field do it. It is very easy.

THE CHAIRMAN: Did you have something, Walters?

MR. WALTERS: Most of the competent engineers have come to Washington.

MR. HERRING: No, not all of them by any means.

MR. WALTERS: Finning has not been here.

MR. ROEWE: You mentioned a moment ago, Mr. Nicholson, that the construction cost could not be figured down to the last cent. I agree with you in that. That being the case, it is possible for the borrower to get some material from the construction crew and contractor and put it into the cost of construction. That is going on whether we like it or not.

MR. NICHOLSON: I said that they could not do that. If, in the necessary purchases for the project, they found they had two or three meters left over, they would not have to sell them in the open market nor pay for them out of membership fees. If they deliberately purchased fifty meters beyond the number of customers originally contemplated, then we could not finance those because they had nothing to do with the cost of the project. If they buy stationery and have 100 sheets of paper left over, that is all right. If they have 5,000 sheets left over, that is a different thing.

QUESTION: I am still not clear on this question. If the contractor has two or three poles left over and 200 or 300 pounds of wire, we shall say in theory, the borrower wants it for construction. Is it all right to put that into construction cost?

MR. NICHOLSON: Oh, yes, items like that are all right.

QUESTION: It is not erected.

THE CHAIRMAN: No.

MR. SWANSON: There is no way of including the cost of materials except those erected and in place.

QUESTION: I am thinking of South Carolina.

MR. SWANSON: That is the same thing.

QUESTION: Another thing is this: Suppose they install additional material or more than is necessary -- I am thinking of transformers for the moment, though it could be guy wires or some other item. Can it not be left there?

MR. HERRING: I can answer. The inspector's instructions require him to report such items. That is why we send them to the field to see that the equipment is properly installed and is usable. If the job is being loaded up with extra transformers, we want to know about it. Give us the list of all such materials.

MR. NICHOLSON: Mr. Herring, you have to remember that we cannot forget these projects when the line is constructed. The Government is going to live with these projects for twenty years and the cooperative, at some time, from some source, out of the returns from selling energy or otherwise, is going to have to buy certain things. Now, it is much easier for the Government to help them financially at the time of the construction of the project than two years later. If they need $2,000 a little later to buy

something, there may be a great many reasons why we would not be able to give it to them. The work involved in putting through a $2,000 loan would be enough to swamp us if it happened too often. It is my opinion, that, in the interest of our investments, and for the necessary operation of these projects, within reason, we ought to help them as far as we can at the time of construction. If they have a few materials left over that they are going to need, something they are going to have to buy, I should rather capitalize those items as part of our loan and enable them to use current returns for the handling of their normal operation, than use the money they get from the sale of energy and thus go into default on the payment of interest and principal.

MR. HERRING: I agree. Lend them the money for operating purposes, but do not charge it to construction. You are building up a fictitious figure and your construction value is not there. But, if we were to say to them, "Of this amount of money we have lent, you can take $3,000 for operating expenses," -- I understand we can do it under the 1936 Act, the borrower can go ahead and buy transformers, meters and other materials but to charge these to construction is manifestly incorrect. We need to be fair with ourselves. There is no objection as I see it to providing for extra materials but let us do it in the right way.

THE CHAIRMAN: I have a feeling that we shall arrive at a way of handling this. I think Mr. Herring and Mr. Nicholson have pointed the way. I think we have now come to the time that we have to close the cycle. In other words, we cannot leave this hiatus between the end of construction and the period when the borrower, out of his own funds, would pay the expense that is required or make capital investments, if you please, in equipment that is necessary or will be necessary currently, maybe ten days after the project is energized. I think we shall agree that there shall be a certain amount of money, whatever the amount necessary, available for operation. I daresay that disbursement of that particular money will be a total expenditure, one from the cooperative and one from REA -- in other words, put a certain amount in trust so that it cannot be used for something else. Mr. Herring has said many times that we should make as much money available in advance as can be spent for the job for which it was set up. I am sure we can find a way. I think we have arrived at a conclusion the details of which will meet all of those requirements.

I look upon field people as having two purposes. They have many more. There are two essential purposes: One of these is to do their job as they are instructed to do it and report it as they see it. The other is to help us here at home to see the situation in the field -- which we cannot see because we are too

far away -- and thereby help us to formulate policy. It is not sufficient that a policy be formulated and put into effect. Inside, we say the field people should come back, the engineers, the lawyers and the others; that, Mr. Herring speaks about. But quite important too, are your suggestions relative to the adaptation of policy to the changing conditions. We have those two things. I am of the opinion that that can be clarified.

We have discussed this question of operation many times and Mr. Herring and Mr. Marion have discussed it. It is helping us on a few of the projects that have been energized and with which we have had the difficulty of retaining the manager they hired to do some work.

Now, Mr. Swanson, did you want to say something about those items that have to be paid for?

MR. SWANSON: I want to endorse what Mr. Herring said. I have no quarrel with what Mr. Nicholson says. I recognize the importance of construction costs.

MR. McALWEE: Is that with regard to extensions?

THE CHAIRMAN: Consumer extensions?

MR. McALWEE: Consumer extensions to the farmer himself. The contractor agrees to build so many miles of line and we assume there will be so many consumers on the line according to our original estimate -- about three to the mile. The contractor finishes the line and the consumer ratio is two per mile. Now, after the line has been built, the completion certificate has been certified to by our engineers, and the final audit made, John Smith decides to come in on the line; he says it looks now like it is going to work. How does the cooperative go about putting the extension to John Smith's house when they do not have the money to do it? The borrower has to write in to Washington. If REA does agree to finance that extension by the time the new contracts are ready and the cooperative gets its answer, John Smith has changed his mind.

THE CHAIRMAN: I know what he is driving at.

MR. McALWEE: How does one get the money to finance those extensions? How does it work? If he has that done under the contract, Mr. Herring, is there a contract provision?

MR. HERRING: The contract is all cleaned up. The job is finished. The only way is for the cooperative to take the money it receives

from customers and go out and do the work. It does not entail much work but requires an experienced person to do the work. If the prospective customer has delayed from month to month in making up his mind, and the contractor finishes the work, the prospective customer should pay something extra because it would be necessary to send a crew to build the line involving special work at increased cost to the project. Some of the cooperatives are adopting a basis of that sort. The man could have been warned by the cooperative that it was expected to complete construction on a certain date, and if service was taken after that, an extra charge of ten or fifteen dollars would be made.

THE CHAIRMAN: That is the only answer.

MR. PYLES: I do not agree with that, Mr. Carmody, for that is the very practice we are condemning the power companies for at the present time.

MR. HERRING: You have a different situation.

MR. PYLES: If the customer has had to pay to get on the lines, the power company has disregarded those charges and are not now charging them.

MR. HERRING: I am talking about extensions into customers' homes.

MR. PYLES: I mean the service.

MR. HERRING: If a man who has been living there knows the line is being installed, and has not signed up for service and it is simply a matter of a transformer -- I think when the crew is required to make a trip of twenty miles, the customer ought to pay for it. But it is up to the cooperative.

MR. McALWEE: Maybe I am wrong.

THE CHAIRMAN: I do not think you are all wrong. If the project is approved on the basis of three customers to the mile and figures three transformers to go into that construction, and we have only two on the line at present, would there be anything wrong in allowing a certain percentage of these transformers to be stored? How will these be used up?

MR. HERRING: That is all right, but you still have your cost of making this twenty-mile trip to take care of him.

MR. PYLES: What is a twenty-mile trip?

MR. HERRING: You figure it out. Hire a truck and the expense of a man going out there and back.

MR. McALWEE: That is very true, but the farmers do not see it in that light.

THE CHAIRMAN: I think this has to be said: You must keep abreast everywhere of the local situation. There was a time when you knew pretty much what the policy of utilities would be with respect to rural customers. They did not want them and if they got them, they wanted them to pay a pretty big price. We cannot assume that that is the present policy of the companies. It may be of some. It certainly is not the present policy of the companies that are trying to get customers whose interest was aroused by REA. The least we can do is to meet their competition. We cannot lag behind them because, as you have said, the reason REA got started was because so many people criticized the utilities for not moving forward. Utilities have been and are serving a great many customers and are serving them on new terms, and they will continue to serve customers on new service terms because they must meet the competition. If they walk into our project and offer better terms and conditions than the cooperative could offer, we have to meet that competition, for in meeting such we can still live within the statute and make it pay out. The payout is the deadline for us. We have to adapt ourselves.

Mr. Herring knows more about it than any one of us, but even he has not kept up with those changing conditions because he has not been out in the field all of the time. We have to meet that and I think we shall in that field, as we have done in every other; we will move forward as the need for it is apparent and is justified under the statute, always remembering that the statute is the controlling factor. Even within the statute we must make our policy as dynamic as the farmers who are being served need to have us make it.

I think the main thing for you men to do is to keep us informed about the rapid moves that are being made in the change of policy out in your territory. Mr. Nicholson cannot keep up with it and Mr. Herring cannot. Mr. Herring goes out to Texas and finds lines built one hundred miles further than he was told they were by utility people in his own office.

Then we have the business of keeping ourselves keyed up so that at least we meet the competition. We cannot do anything if in doing it, the project is not feasible or will not pay out under the statute. Let us remember that always. That is the deadline. We cannot move beyond it.

MR. MACKAY: I want to support Mr. Herring and Mr. Swanson against Mr. Nicholson regarding materials to be paid for under the construction contract. I ran into that condition in the field.

THE CHAIRMAN: What condition?

MR. MACKAY: Left-over material.

THE CHAIRMAN: What did you do with it?

MR. MACKAY: I told them the construction contract called for materials in place and that only these could be paid for.

MR. SWANSON: I think I can clear that point up by explaining exactly what happens. The first inquiry has to do with something that pertains to operation. Assuming that, he says the certificate of completion has been given. That means the Construction Contract has been closed.

ANSWER: I disagree with you there. The service connection is part of construction. It can be capitalized.

THE CHAIRMAN: It can be capitalized, but can it be done under this particular Loan Contract?

ANSWER: I do not think so.

MR. SWANSON: I say this, that the Construction Contract, particularly when completion certificate is given, so far as the contractor is concerned the contract is closed, and so far as REA is concerned the agreement is closed; the final figures have been received; and the sponsor and REA have both been satisfied. Then when the sponsor is faced with the problem of extending a service line or any kind of line; obviously, that is added capital and can be capitalized.

MR. NICHOLSON: I might suggest one answer. These projects ought to have a little working capital. It is sometimes very distressing to find projects where the membership fee is only a dollar, or, as in some cases, where they have collected no membership fee. We have not made the requirement of a five dollar fee, but my opinion is that we should emphasize to the local people the fact that they are running a business of considerable scope which must have some working capital, and which should be worth five dollars to each of them. Ten dollars would not be too much. If they have three or four thousand dollars, they can do the things about which we have been talking.

THE CHAIRMAN: In many cases promoters have collected fees and then decamped. That situation exists all over Texas. There are certain parts of Pennsylvania where it is almost impossible to get people to put up any money for that very reason.

Question: Is that on our projects?

THE CHAIRMAN: Yes, on our projects. They were reported to be REA projects before the people knew what they were being exposed to. It has existed even in the enlightened State of Wisconsin.

MR. FISHER: They have a new president.

I should like to make a statement in connection with what Mr. Nicholson said. First of all, I fully agree with what he said as to having a membership fee of not less than five dollars, which can be collected perhaps in installments. I think in many cases a small down payment until the project begins to look feasible and looks promising might be all that should be required. There should be a promise for the remainder.

I am seriously in doubt as to whether a membership fee of five or ten dollars is going to prove to be sufficient working capital to carry these projects through until the time when they begin to receive payments for electric service rendered to the customers. We are not sufficiently on the job yet with regard to house wiring and we are not sufficiently on the job with regard to the sale of appliances. We are not sufficiently on the job yet as to organization, etc. We are so new, and we have such limited experience that we have a problem in our minds today relative to when to begin and at what point to begin the work of organizing for business, not organizing for getting a loan, but organizing for business in order that we might get some of these things done in time and so that as soon as the line is energized they can begin to collect on it.

Possibly in the future, we shall have a successful plan at our finger tips so we may know when to get these prospects into the mill and thus require a minimum of capital in addition to collecting two or three bills. It is perfectly obvious to me now that these cooperatives are going to run into very serious financial difficulties in paying their management fees, in paying their bookkeepers, their bills of one sort or another -- printing notices, payment for collection slips, payment for meter readings -- which will come in at the last moment unless we give them some operating capital in our loan.

Mr. Nicholson has pointed out that our loan contract does not give proper provision and he does not feel that it is necessary to make provision for the lending of operating capital. He also states the deadline within our province, under the law, if we choose to do that. Maybe it needs to be crossed

as a chimera of a few persons, but I do feel that we at least ought to mention the possibility: that where a project can spend it, we ought to stress the readiness for a need, as demonstrated to me, of a loan for operating capital.

MR. O'CALLAGHAN: During the construction period, under our contract, no cash interest is payable by the borrower. We have adopted a very lenient program of extending the construction period beyond the completion of the actual construction so that any income that comes in at that time need not be paid to REA. That is a little cushion. We have adopted a general policy of postponing the payment on account of the principal to twenty-five months after the date of the note required to be delivered by our borrowers. We try to keep the date of the note as close as possible to the date of the commencement of construction so that after construction will have been completed, the borrowers will have a whole year to operate without any payments on account of principal. Sometimes there will be more than enough money accumulated out of operating revenues, and of that some may be used as a reserve for operating capital. Theoretically, they would only have to start accumulating for our first monthly payment a month before it is due, because the project is supposed to be set up on the basis that it takes this month's earnings to take care of the next month's interest and principal. So we have not been very deficient in providing for our borrowers.

THE CHAIRMAN: I think we have been more lenient than any other Government agency that I know of. We cannot be blamed on that score. The question is how much further can we go under the statute and still make self-liquidating projects. The restrictions which we have placed have not been made unselfishly. In other words, it is not to our interest to see these enterprises in default. Let us leave this question of operating expenses to the lawyers. Could you give them an operating fund?

MR. CAVANAUGH: There is a further point which has not been mentioned. We have a statute by which the contractor must be bonded. Those bonds, under the present set-up, must be for five thousand dollars. Then there is the item of property damage insurance and public liability on the project, the total cost of which sometimes exceeds four hundred dollars.

THE CHAIRMAN: We need to make a special study of that and this Nebraska Act to see whether or not the unicameral questions might really be solved.

ANSWER: That is being done. The bill has been passed.

THE CHAIRMAN: On this point of operating expenses and working capital?

ANSWER: In regard to membership fees. I have seen some projects where they have a five dollar membership fee and by the time the project is energized there is very little left of the membership funds because they have spent most of the money for items that were disallowed or that have not been permitted.

THE CHAIRMAN: Preliminary items obviously cannot go into building of the new lines and that is what the membership fee is supposed to be spent for.

MR. MEIER: There is another angle to the operating fund in connection with getting a project started; that is, whether the directors shall receive per diem or traveling expenses and whether they make an allotment, and whether it makes a legitimate part.

THE CHAIRMAN: In Nebraska, they may receive up to six dollars a day under the Nebraska Act. In other places they may make their own arrangements. I do not know what the answer is. There again, you are dealing with three hundred or four hundred organizations all over the country. What do you recommend?

MR. MEIER: I think there should be some provision for compensation.

THE CHAIRMAN: For mileage and time?

MR. MEIER: The charges of the meeting.

THE CHAIRMAN: I think we ought to go to some people and get some facts on those points from people who know about cooperatives. There are a great many people, some here in Washington, who have developed definite ideas with regard to cooperatives. I have not asked them. I think we ought to get advice regarding cooperatives and their psychology from people who have lived with them.

MR. MEIER: I have paid out $735 for cooperative experience and I am speaking from that experience. My observation has been that you cannot expect directors to use their time and pay their own expenses and continue to be interested in our program. They are soon going to develop a psychological attitude that so-and-so is getting just as much as they are and not doing anything to make the program progress.

THE CHAIRMAN: $750 may be too much to pay for experience.

MR. MEIER: I think people should be willing to pay those who give up their own time in behalf of the group.

THE CHAIRMAN: Well, now, Mr. Herring, have we exhausted this?

MR. SWANSON: I wanted to finish one point. It is a wholly new subject that has to do with the question of meters. I want to explain what is actually being done.

THE CHAIRMAN: That is after the contractor has left the property.

MR. SWANSON: I am going to say, as Mr. O'Callaghan says, we do not know the day the contractor gets through until the engineer turns in the certificate of completion.

THE CHAIRMAN: How many have we closed up at the present time?

MR. SWANSON: Six or seven.

THE CHAIRMAN: Now I know what you mean.

MR. SWANSON: What happens is this. The contractor takes the contract on the assumption that so many customers will be connected. He goes down the line, puts in all the poles, wires and transformers in front of the houses of the customers who have signed up. I presume that is the time you are referring to first. That means the contractor has actually completed that job so far as he is concerned. He has the service drops run up to the houses. But it is not up to the contractor to set the meter. The meter is furnished by the sponsor. Whether or not you know that, I do not know. The sponsor sets it and we reimburse them for setting that meter. As long as the loan contract is open, we can continue to reimburse the sponsor for setting meters and hooking up the wires. That would take care of the cost to connect customers that have signed up, even after the contractor has gone and the construction contract is closed.

QUESTION: Does that include transformers?

MR. SWANSON: That is in the contractor's bid. He puts that up.

THE CHAIRMAN: So when he moves off, the transformer is there as well as the drop.

MR. SWANSON: I think it is well to find out if there is any doubt about that point; it has been raised so many times.

QUESTION: I did not know the meter was included.

MR. SWANSON: The sponsor buys the meters under a separate contract. They are delivered to his warehouse. The sponsor may, at the end of one year, have only 500 out of a possible 1,000 installed, but we cannot close the loan contract until he gets the other five hundred in.

THE CHAIRMAN: That leaves two situations, Mr. Pyles, as I see it: The contractor went down the line understanding that there would be three hundred customers and put in a drop for two fellows that did not want to come in at that moment but would come in later. The contractor went about his business. Finally, the two fellows come in. You ask, what shall they be charged? Another comes in who was not a signer and was not included in the beginning; he has no transformer. You have those two fellows.

ANSWER: I was simply talking about the first one.

MR. McALWEE: Sometimes there is more equipment required than a drop.

THE CHAIRMAN: Let us see what it is. It has not been closed yet. We have discussed the advisability of extending that. It will be released within a few days and then we shall discuss it.

MR. McALWEE: The reason I raised the question was at the time the map was spotted this particular farmer lived too far back to get service without paying for some of it, because then we only granted free service for one span of wire and a hundred foot service drop. Now, he can be taken in under the new plan that has not been adopted as yet. In that case it would require more than could be rolled up on the top of a pole.

MR. PYLES: Would it include the first span of wire?

THE CHAIRMAN: Of course, it would have included it. If the man's house is set back, quite naturally before the contractor moves that equipment he would have to have that equipment up.

MR. SWANSON: The contractors get paid so much for the poles in place and so much for the gadgets; the wires are paid for at so much per thousand-foot lengths. If the sponsor of the project wants him to go back, I presume he will, provided he gets paid for it.

MR. McALWEE: You would go back if you were the contractor.

MR SWANSON: If I were the contractor, I would only go back within the limits of the contract.

MR. WISE: Mr. Swanson has said as long as the loan contract is in existence you can go ahead, but there is a serious obstacle to that and it is becoming more serious all the time. That is the source of the allotment. There is no allotment to take care of the extra customer. In many projects, the allotment is not high enough to take care of the customers which they have. If we are going to carry out Mr. Pyles' suggestion, we shall have to increase the allotment.

THE CHAIRMAN: I think we have discussed that in the organization, and there is an inquiry going on, one related to the other as obviously they can be related.

Mr. Herring, do you want to go on with operations now?

MR. HERRING: Our little agreement was that you were going into this question of selecting managers.

THE CHAIRMAN: If you are just waiting for a chance to follow me, you shall have it quickly because this is the situation: I do not know that we have enough information yet to warrant any of us saying that as this project gets toward the period of energizing you may pay a manager so much. I think that generally speaking, whatever we do now, we shall soon come to the point where we realize the necessity for having a manager. I do not know what his title might be. It might be secretary; it might be treasurer; it might be something else; it might be even an engineer; or it is likely to be a person who is going to carry the project through on the business side as long as he can make it pay out financially and until it is paid for. I think we shall reach the point when we shall see that the borrower gets such a person on his payroll early, as early as it is physically possible to start to build and to check the load building. As a matter of fact, he ought to be in from the beginning; maybe he will come out of the organization. He may be the originator of the project. He may be important from some other place or he may have come from some small utility, or from a certain kind of job in a large development. He will bring to the project as much experience as one human being can bring and work for what they can afford to pay him. That is a very general statement. I assume most of these projects will be able to pay between $80 and $250 per month, not at the beginning, but at some stage of their development.

As a matter of fact, no enterprise can exist without management, and we must know that the management is capable;

moreover, it must be coordinated. In many of these projects, the lawyer or engineer assumes the managerial functions. Neither is likely to stay on and carry forward detailed work in educational programs, collecting bills, repairing lines, and all that sort of thing. However, if you set up the man that Mr. Herring describes in all of those reports -- what do you call this man, a composite man? -- he would have to be everything from a Sam Insull down to a repair lineman. Obviously, we cannot expect that. Somewhere we shall have to work out a method of training these young men who will find themselves out in these jobs.

We may find some young men who have had the experience those cooperatives need. They will need to know about the philosophy of coordination. They have to do that because if these cooperatives are taken apart and put into the hands of only a half dozen people, they will not be very good borrowers. What we have to do is to build them up. Not one thousand people, but farmers who are interested in making this thing a success. The manager must be the kind of person who can live in that atmosphere. He has to be able to make a budget, to anticipate expense and figure out how he will meet this expense. That is my talk on this thing. It is very indefinite.

MR. HERRING: I agree with you in that. I rather judge from what you say, from one point that you made by inference, that it is impossible, practically impossible to set up qualifications and specifications for men for a managership which will be applicable all over the country. Each project, in my opinion must be considered separately. Here is a project of only sixty miles with 200 customers. Such a project, manifestly, cannot afford a full-time manager and it has to be somebody on a part-time basis to take care of it. There are other projects which run up to 300 or 400 miles; here the project can afford to pay a little more money. I mean they will have enough left from their gross income to pay a little more money for a man to handle that project than there would be for a very small project.

Now, in the question set up for discussion, how shall cooperatives select managers and engineers? I think too many of these projects go at the selection of a manager in a very haphazard manner. Here is a man pretty well known in the area. He is, let us say, of a certain type. At any rate, he knows people, he interests a number of people and they start out on their project. They do a good job. This man may not know anything about electricity, and in most cases he does not. In a good many cases, he is interested in it because he thinks

there is a chance of working up a good job for himself. There is no reason for trying to fool ourselves about it. So the thing that we have to guard against is to get in, even in the early stages of the project, a man we may call manager, who is going to continue as manager but who is really incompetent to do the job. We are just as much interested, we in REA, and perhaps more interested, in seeing that they get a man who can do the job as it should be done, as the cooperative. And when you summarize what constitutes doing the job well, I think you could probably put that into a few words and say that his duty is to see that there is sufficient revenue obtained from the project to take care of the necessary expenses in connection with it. There are a number of points to consider but certainly that is what we want the managers to do. And if they are not going into default, that is what the manager must do.

In selecting the men, I think all of you who are in the field can well realize that the selection depends not upon one thing but a number of things: His ability to handle any kind of business, and his familiarity with business of some kind.

In selecting engineers, we started out on the basis that we were not going to employ consulting engineers for this work because the fees they wanted were, at first, altogether too high. We decided the thing to do was to employ individual engineers, pay them a monthly salary, a rate at which they were ready to go ahead and do the work, competent men, of course. After three or four months of such work, we reached the definite conclusion that it slowed up the work to employ an individual who had no office, no personnel and no equipment to do this work. We decided very quickly to use consulting engineers, engineers who were definitely established, having an office, some personnel and equipment available to do the work we wanted done. We have found, and experience has taught us very definitely, that that is the proper way to handle the work. The consulting engineers take hold of the work; they have the personnel and equipment to go right ahead and do it. We get the plans and specifications in a third or a quarter of the time that it takes an individual engineer to do it. This is not a reflection on the individual engineer, but it is a definite indication that the man with the qualifications for this job, with the ability, personnel, and equipment, can do a much quicker and better job.

In addition, these men in general, must be in a position to finance themselves for the time required to get the first advance from the project.

That, I think, is all I need to say about the selection of engineers except to comment on the fact that when the project is initiated and the development people are talking with the project sponsors, caution them to be very careful and reasonably slow in selecting an engineer because it is not good for them to pick out, perhaps, an individual who may be a thoroughly good engineer, possibly an irrigation engineer, but who knows nothing about distribution line work. Such a man may start out to make the maps but when it comes to laying out the system, we find that he is not competent and we have to get another man. This is embarrassing for the engineer; it is hard for him to explain in his community why he has been superseded.

THE CHAIRMAN: Mr. O'Callaghan is going to talk about that.

MR. HERRING: Now, going directly to the operating end, naturally someone must be responsible for the operation of these properties when we get to the point where we close them up and energize the lines. There are three phases in the work, as I see it: first, the promotional or development stage; secondly, the construction stage; and thirdly, the operation stage.

The project should have someone such as we have been talking about as manager. I have found very definitely that there are very few of these people representing the projects, who have any idea as to the amount of money that may be available after they go into operation, for the payment of salaries. We have devised what I have termed a one-page budget sheet. It has been sent out to the projects so that they can find out whether they will be in the red or in the black.

What they can do after they go into operation naturally depends upon the revenue derived from the project. The first thing, to my mind, that I should want to do would be to determine or get a key picture as to the amount of money with which I had to work. In the expense line there are certain things that are very definite. You know, for instance, that there is interest and amortization which is going to call for about 6½ percent, taxes and insurance 1½ percent, the cost of power at 1¼ cents per kwh based upon 300 kwh per $1,000 line which will run 4½ percent. The operating charges will probably be about 2 percent. The maintenance fund, if one is set up as we require, would be around 2½ percent or a total of about 17 percent. To that, in the first four years, should be added a fund equivalent to one year's debt service which would require an additional 1.75 percent.

So you see, when you begin to figure what these costs are, the reason why we must have the revenues. We do not want to have these figures quoted or given to any of the project people. I have refrained from using figures ever since I have been in the organization because I have found they were not properly understood.

Some of the projects will need to be operated by a part-time man, that is, a man they may pay $25.00 per month, who will devote such part time as is necessary to the work. He may read the meters, do the billing and take care of any ordinary and minor problems, but if there is a break in the line, it may be necessary to get a lineman to go out and repair the line. As the project becomes larger, it can afford a man at a better salary. Perhaps that man can make minor repairs on the line. If not, he will have to make arrangements with someone who can do the work. The larger projects will have a full-time man who is a business manager and, perhaps, a part-time operating man. The larger ones will be entitled, and when I say entitled, I mean by reason of the revenue, to a combination bookkeeper and stenographer. It will not require a full-time bookkeeper or stenographer to take care of the business, so a person who has both those accomplishments would answer the purpose. In the smaller projects, part-time workers will need to be used.

I want to comment on one situation which I ran across recently. On one project, with no lines energized, the bills payable on November 30 were something like $12,000. Those are not charges for construction. They cannot be approved from construction loans. How are they to get $12,000 to pay those bills? We do not know. We are not going to let them slide that over into operation if we can help it, and get by with it so that in all of these other projects this same thing may come up.

Here's something we want to bring in under construction. Under construction what can we do with it? Well, if you people think they can pay it over into the operation, if they have operation revenue, you are asking them to put something in there and it will probably be a long time before they can pay for it. If the project pays money from the beginning, they may get around to something of that kind in reasonable amounts. If it worked out as most of them will work out, it will take time to build up their load and get in a gross revenue to take care of the actual expenses and to take care of any accumulated expense. As a matter of fact, the operation of any of these projects is not different

from any other piece of business property; it is only the details that are different. To my mind, it simply means that a man who is handling that should be able to exercise good, common, ordinary horse sense in the solution of his problems. If he does that and holds up his revenue, he will not have any difficulty with the project.

THE CHAIRMAN: I believe that the best man who could be got in this field and who would be able to render all the services which he would need to render in the next few years, must possess broad experience or be specially trained now. I do not believe we realize the tremendous task involved in taking care of this job if it includes the development of greater usage of new farm equipment, the invention of new equipment, and the job of keeping people stimulated such as is the work of the county agents. I do not think that we realize all the energy this will take for the next three years. I think we shall find that this management business is going to be right here in our offices. The chances are in the next two or three months we may have a school. I believe I talked about that. The development men and the field engineers will be suggesting the men that the cooperatives ought to send in to undergo a course of training. Mr. Herring, Mr. Swanson and Colonel Sass will help build it up. The men will go out from this school with all of the information they can possibly absorb in the course of two or three weeks and then they will come back after three months and take a post graduate course. In the meantime, we shall learn some things at headquarters as we did in the World War.

MR. FISHER: I have a specific picture in mind which is very useful and I think a picture of the particular manager for a particular cooperative project that has been in existence for about ten years. It is the Peninsular Electric Company just outside of Tacoma. I visited that project and went all over it last summer with the manager when I was in the State of Washington. I have a very lively and happy picture of this particular manager of that cooperative which was built up voluntarily and without any help from REA some ten years ago. Those lines have been pushed right out through the forests and it was wonderful to find how little cultivated ground there was to support the rural lines. Most of it was forest. There was a fishing village there from which they got some traffic, and the rest was from gardening. There was a fairly low consumption at fairly low cost prices. The manager who took me over the lines postponed eating dinner to do that. We rode over the lines for several hours and I observed the manager's attitude toward his job. I think he is fairly

typical of managers as we shall see them. He started out as a lineman of some kind. He had no engineering education but he had contacts with electric service lines. He knew he was not an engineer. He early cultivated local cooperation at the University of Tacoma. He praised them for their readiness to help estimate their rates. In the course of time he learned a great deal and had to call upon them less and less. This man took care of breaks in the service, and he, with an assistant or two, would put up new poles and lines. He had a bookkeeper who worked evenings. He was of the same type that Mr. Herring mentioned. The thing I saw there, in addition to what this man considered really important engineering problems, was how these problems could be worked out to extend the service.

The thing above all that got my attention and which I think is significant is that there were no agencies or set-ups there requiring him to make a profit and no one so close to the profit point of view as to be on his neck. He developed in the course of time a sense of proprietorship. He had a personal attitude as if it were his property even though he drew so small a salary as to be almost ashamed of mentioning it in the terms of prestige that goes with a salary. He said, "I am happy". He had a small house. His real happiness on that job grew out of the fact that he was his own boss. This project was a real means of self-expression to him.

At the start, our projects may not have that, but in dealing later with all of the members of the cooperative, we are going to find that although our project managers will not be as well paid as men of real ability in private industries, they will have compensation in self-satisfaction, in feeling that they are able to maintain a position in the community through their own effort maintained through their own sacrifices.

THE CHAIRMAN: Mr. O'Callaghan, on that lawyer business, will you tell these fellows about how to avoid getting the wrong lawyer started on the project?

MR. O'CALLAGHAN: May I just go back for one minute to the business of service lines after the project is closed? As you may not know, we have been using for the last three months an open form mortgage. It is an original instrument. I do not think there is one like it in the world though we think it will work well. We provide that that mortgage shall secure loans of $5,000 in addition to the present loans we are making. Then the securing of additional loans --

THE CHAIRMAN: I think your new technique may offer better protection under the circumstances.

MR. O'CALLAGHAN: It has been in effect only since the beginning of November.

THE CHAIRMAN: We probably have two or three contract forms now.

MR. O'CALLAGHAN: They are more or less changes in form. They follow pretty substantially the same form from the beginning.

THE CHAIRMAN: I suspect it would not hurt to have it cleared. You can get a loan contract and find out, if you want to read it over so many times.

MR. O'CALLAGHAN: That can be done, you can get a list of these projects where we have the open card form of envelope. We can handle that situation in most cases from now on, and in all cases in the future, so there will not be any insurmountable barrier.

Now, in regard to attorneys, we started in the Legal Division on the assumption that we are going to insist on having legal entity validly incorporated for the borrower, and that our mortgage and loan contracts are going to be validly executed and, with respect to the mortgage, validly recorded. The question as to whether the project shall pay out is something which is not peculiarly in our domain.

If anyone in this audience wishes to refer to the files of most of these projects, he would be quickly enlightened as to the trouble we have been put to by incompetent lawyers. We have had considerable trouble in the first instance of coming in contact with a lawyer. The allocation is made for the project and it is a new born baby so far as we are concerned. There is nothing in the file as to the counsel who will represent the borrower. There is no lawyer to start with, so we have to consider what we ought to do to get a lawyer and what qualifications the lawyer should have.

Last summer or fall, I suggested that we ought to request that Development Division men in the field, survey the situation, since they would be the only ones on the ground floor who would be in a position to get a set-up of the local lawyers. Of course, we do not want to advise the development men to advise the project sponsors to hire a lawyer or to

come anywhere near it. In fact, we want to discourage the sponsors from making any commitment because in the last analysis, we have to pass upon the qualifications of the lawyer, and it is true, I suppose, that every local group wants to recognize home industry and give the job to some deserving man around town.

The qualifications for the legal jobs we have are somewhat peculiar and are something that most country lawyers cannot meet. They may be and they generally are, quite expert as trial lawyers and as to transferring real estate in a small way, but it is no disparagement of them if they have not had experience in forming corporations, drafting mortgages, preparing minutes and recording instruments such as we have, looking after the mortgage features of our instruments, and getting up opinions of counsel. They cannot, without a considerable amount of experience, see the importance attached to these points by us. Therefore, we urgently request the development men that, in surveying the situation, they insist that the local sponsors in no way whatsoever commit themselves to the choice of a lawyer. Not only must they not enter into an agreement with the lawyer but they should not talk with him. We learn from bitter experience that a great number of the lawyers that have been recommended have had to be turned down, and if the sponsors have approached certain of these local lawyers, it is embarrassing to them and it is embarrassing to us to have to reject their candidate. This matter has all of the political ramifications, the worst sort of them as a matter of fact, because the local lawyer can go to his Senator and his Representative in Congress and possibly three or four of the other State political leaders -- and get innumerable letters attesting to his high character. He may have the recommendation of everybody from the State Senator to the Secretary of State. The candidate may be a very unquestionable fellow but it does not prove his competence as an attorney.

I think that you men in the Development Division who come up against the delays that occur on many of these projects will believe us when we say that there is no greater cause for delay than the incompetent lawyers with whom we have to deal and whom for one reason or another we could not get rid of. Sometimes we have to take a man who outwardly looks to be quite able and there again, bitter experience shows that we have been led astray. Anybody who wants to read the file in Tennessee 1, Pennsylvania 4, and many others I might mention could find out what I mean. But the principal point, I should say, is that the Development men -- I think this has been covered in a memorandum that Mr. Nicholson got out -- should

know and realize that work involved in what we call long term corporate financing is of a peculiar sort and requires particular knowledge. It demands at least ability to turn what knowledge they have to the drafting of articles of incorporation and by-laws and other instruments needed in connection with loans to our cooperative borrowers. Comparatively few men in any State have that experience, so that our attempts to locate and find a lawyer come down to the point that we must confine ourselves to relatively few candidates. But we do feel that the best results will be obtained if the Development men will educate the local sponsors and put them in the frame of mind about the proper qualifications of any proposed project and stop there. I suppose this will disabuse their minds of the thought that they can employ any local lawyer whom they feel deserves the job.

THE CHAIRMAN: Yes, Mr. Long.

MR. LONG: I wish to state in connection with the selection of lawyers as I have found it out in the field, that I am in full accord with what you say. The difficulty that we meet is that before we get into the field we find that the cooperative or sponsor of the project has already talked to the lawyer. I am not saying this in defense but we actually feel, at least I do, and the other field men do too, that we ought to suggest to the cooperative or sponsors of a project that they ought not to select a lawyer or to look them over but to send the names in to the REA so that we can investigate them. That is being done. But the difficulty you have is in the selection of attorneys such as the case of Mr. Latky, I think, out in Oregon. A lot of those lawyers actually promote the project so that they get the engineering and the legal work. Do you not find that your difficulty has been in cases where they previously have been selected and have forced themselves upon you long before we arrive on the scene? It is the same thing with the engineers. I am trying to explain the situation as we find it in the field.

MR. O'CALLAGHAN: I understand. I realize you run into it a lot of times.

MR. LEWIS: I think this early selection of many of those who are our attorneys is our own fault. Some of the literature sent out by REA, at least last summer, stated on these applications for projects: When you submit the project, give the name of the attorney with whom you wish to correspond.

MR. McALWEE: That is in our literature.

THE CHAIRMAN: We cannot stop methods that Mr. O'Callaghan says we ought to stop if we do things of that sort.

(Remarks off the record)

MR. CAVANAUGH: We have had some trouble with the officers and directors. The sponsors do not always choose representative citizens for its officers. We had an instance where the moving spirits, four men, were subject to indictment for embezzlement.

THE CHAIRMAN: Do you mean subject to indictment, or had been indicted?

MR. CAVANAUGH: Subject to indictment. The trial is being held this month.

THE CHAIRMAN: You apparently have never been on a grant jury. Let us not assume that a man is guilty because he is indicted. It may be a frame-up.

MR. CAVANAUGH: Then we have a number of instances of men without any background or reputation, whose names are being sent in as directors and officers.

THE CHAIRMAN: I think we have developed in an enterprising manner, but if the colonists during the American Revolution had waited to start until respectable people only had the spirit, there would have been no revolution. That brings it right down to date. You cannot expect people who have utility stock and are depending on utilities and similar enterprise for their livelihood, to start cooperatives that they think might take business away from these utilities. I think we have to expect that these cooperatives may be started by men in the community who may turn out to be the leaders in ten years. They may have more civic enterprise without having the wealth in their hands. I, myself, have met some of these project sponsors. They did not look like bankers but I would trust them just as far as the local bankers. The credit rating you can get on a banker may not be worth a tinker's damn.

MR. CAVANAUGH: To protect the Administrator we must take immediate precautions against men who might possibly abscond with the funds.

THE CHAIRMAN: Is not that taken care of with their bonds? I suspect these who undertake to get a project under way are all over-investigated. You see, first of all, they are

exposed to the community by the agents of the power companies that want to break up the project, and there are still a lot of such places. All you have to do is go into the field where the reports come in about every hour. If they stand up with 3,000 of their farm neighbors, we can assume that they are pretty fair. Even J. P. Morgan said, "The real rating is the character rating." I am not saying that the Government ought to lend to people who are on their way to Sing Sing, but when we come on this question of credit rating, we must take character and community standing into consideration.

MR. CAVANAUGH: I was State's attorney for two years.

MR. PYLES: May I ask if that particular project that was mentioned was developed by the field force, or did it just come in?

MR. FALKENWALD: It came in. Can you tell us if a field man was on it?

THE CHAIRMAN: The question is, was it developed by the field staff?

ANSWER: My understanding is that it came in.

QUESTION: Has it been alloted?

ANSWER: I think it has.

ANSWER: The contract has not been signed.

MR. WISE: Can I go back to the manager question here? Have you any service whereby the field man would refer the project and its particular problem? As Mr. Herring said, this question of management differs entirely in each territory. I do not think the development men run into it as much as the engineers.

THE CHAIRMAN: I shall tell you how it is working at the present moment. They are set up by the Administrator, a board or committee. He did not say how long he wanted it to function but I assume at least until the work can be done. On that committee, there are Mr. Herring, Mr. Marion and I. We try to go over the projects every week as to status, and the correspondence is brought to that committee. It comes to Mr. Marion or Mr. Herring and either one will bring it up here. We go over it and outline the answer there, so if they go through to Mr. Marion or Mr. Herring, it would come to the committee. Out in the field, you might tell them that,

MR. FALKENWALD: We have been promised a list of what they term responsible lawyers in those States. Are we going to get that list?

THE CHAIRMAN: Well, the thing boils itself down to this: All of the complaints that REA gets come from people who say without exception that those we pick are the most reactionary lawyers in the State -- and that is said of all three of them sometimes where we pick three. I just sent a group of men to Mr. Nicholson who complained about all three men in a particular State. Two of them had gone to school together and were out of sympathy with cooperatives.

And so it is with the engineers. When we started REA, it was extremely difficult to get engineers who were socially-minded. Engineering societies like the Bar Association are almost wholly against this so-called New Deal philosophy. I think the point here is, as Mr. O'Callaghan says, and as Mr. Herring said, that you ought to warn sponsors not to get committed to lawyers or engineers of any sort. We should have them write in here. It is our business to help them secure lawyers and engineers who are not only technically proficient but sympathetic with their aspirations.

As I stated in the beginning, I cannot understand why these borrowers who are getting 100 percent of the money required to build their lines from REA, can believe that they can find a better friend than the REA. If we are willing to lend them money, they ought to assume that we are the people who are willing to be friendly to their objectives. We have a right to expect them to believe, and then we must live up to that trust completely in our dealings with them.

Mr. Luff, can you tell us about plumbing and how far we ought to go with it; then, if Mr. Stone will say what he has done, or what he can do, then we shall go back to work.

MR. LUFF: Well, we have made the preliminary investigation.

THE CHAIRMAN: I shall say this before Mr. Luff starts. He has told me that while he is interested in the whole program, he is very much interested in getting plumbing on the farm by some process or other.

MR. LUFF: I must say we have no plumbing yet.

THE CHAIRMAN: He knew it would come slowly. We all know it will.

MR. LUFF: My impression of the significance of Mr. Freeman's chart is that it does not look as though very much financing will be available for plumbing.

THE CHAIRMAN: I do not think that need worry us.

MR. LUFF: We are ready with technical assistance and a background of investigation and we know what the conditions are in the rural areas. Incidentally, I crawled under a few farm houses to see how they are put together and how the plumbing work must be organized to be installed satisfactorily. We have developed the procedure, with Mr. Frazer's cooperation. Mr. Frazer has prepared the necessary legal papers for contract forms. Mr. Frazer and Mr. Stone and I went out to Minnesota and arranged for a project which we expect will be the experimental ground, showing what can be done in carrying out this plumbing program. That is the status of the program today.

THE CHAIRMAN: Can it be carried on without going in with wiring as a separate activity? Is there any possibility of the state-wide or a project wishing to go ahead with the plumbing project, as such, apart from the real project or contract?

MR. LUFF: It can be carried on independently.

THE CHAIRMAN: I mean as a practical matter, is it a practical thing to merchandise it that way?

MR. LUFF: It depends upon the way in which you want to accomplish this installation. If you want the plumbing installed the first year, you must take care of the finances of the customers in the area being wired. If the customer on the average has $100 to spend on wiring and other things, if he spends it all on wiring, he has none left to spend on installing plumbing.

THE CHAIRMAN: The question comes up, what would be the cost of a bathroom outfit? One man says the farmers ask that.

ANSWER: There is raised the question of how you go about it.

THE CHAIRMAN: Yes.

MR. LUFF: The question is concerned with the procedure in regard to the purchase of material.

THE CHAIRMAN: Assuming you could do as you please, break down all of the commercial standards and labor standards, what could you do it for; or, assuming that you do not want to break them down, using for the very skilled operations skilled men or semi-skilled and buying plumbing supplies as they might be needed for groups of ten or twenty houses, what is the range between those two extremes in round figures?

MR. LUFF: You speak of a bathroom outfit?

THE CHAIRMAN: That is the question. You might enlarge a bathroom and then install normal plumbing for a six-room house, what would be the minimum cost for installing minimum sanitary standard equipment in that house?

MR. LUFF: You mean a bathroom and kitchen sink and the necessary water pumping and sewage disposal equipment?

THE CHAIRMAN: Yes, that is right.

MR. LUFF: The cost of materials would amount to about $213 under average conditions.

QUESTION: Wholesale or retail?

MR. LUFF: That is the price at which they can be obtained wholesale.

THE CHAIRMAN: Laid down on the farm?

MR. LUFF: At the cooperative.

ANSWER: It would cost approximately $350 to do the job.

MR. LUFF: That could be installed under present contracting practice which is applied in the cities for about $400.

QUESTION: Does that include automatic pressure plumbing?

MR. LUFF: That includes everything to carry the water into the house under pressure and to carry the waste out. That provides a standard of plumbing corresponding to the standard recognized by PWA in their low-cost housing.

THE CHAIRMAN: You say recognized by PWA in low-cost housing? That apparently protects certain waste and inefficiency in the distribution of plumbing supplies.

ANSWER: That is right.

THE CHAIRMAN: If you get down to an absolute minimum, could you do it for $200?

MR. LUFF: Less than that if you get material from the manufacturers, taking into account their savings in advertising and compensation for salesmen and all those things which would not be necessary in any normal operation.

THE CHAIRMAN: In other words, you would expect in the end to do what was done in the automobile business where in the end they made an automobile costing $2,500 for $500 or $600, putting that relation between the necessary standards and cost assembling basis and discarding patterns used only once in three years.

MR. LUFF: That is right. There has been practically no standardization in the plumbing industry. The manufacturers have fought it. I have been a member of the American Plumbers' Association. We tried to get them to do that but they did not cooperate.

THE CHAIRMAN: Mr. Stone, will you say something about wiring?

MR. O'CALLAGHAN: In the absence of Mr. Frazer, I suppose we ought to cover what the Legal Division has done. Last spring, before Mr. Frazer joined our force, we had a call for a wiring project in Ohio, the Miami project. At that time, we got up a form of wiring loan contract, one between the Government and the borrower, and also a form of contract for the contractor who would enter into the contract with our borrower for the installation of the material. A set of contracts and papers between our borrower and the customers and the borrower was sent with those instruments. We put through a loan of $30,000 I think it was, down in Ohio. They subsequently claimed that they could handle the matter better through some private financing so they never made use of their contract and the borrower never got any money on it. But Mr. Frazer has been with us since August and he has been assigned exclusively to work in connection with wiring loans. Ever so often, he revises an instrument a little bit further, and so far as the Legal Division is concerned, I think I am correct in saying that we are equipped and ready to handle wiring projects, either lent separately or combined with plumbing projects. And until we hear that they are not coming through, Mr. Frazer will continue to be available for that

sort of work. It is my wish that something concrete in the way of a project or several projects to work on could come to us.

MR. STONE: The Development Division has been working with the sponsors of thirty-five projects for house wiring and plumbing. We received one application -- Minnesota-3W - Meeker. This project was wound up in the field and has been signed by the Administrator. In connection with Iowa-9W-Scott, the applicant made a request for something less than $27,000 and included in that request, was an average of $35 for fixtures which I understand was not approved. Is that right, Mr. Swanson?

ANSWER: It was turned down temporarily on account of the inclusion or request for fixtures.

MR. STONE: Mr. Frazer has been very helpful in drawing up and simplifying contracts and forms. There were twenty-five pages in the original contract with Ohio.

ANSWER: Twenty.

MR. STONE: He has drafted all forms to be used in connection with certification as to installations. Every time the project sponsors send in vouchers, it takes some ten forms or more to get funds for REA, and the details in connection with getting money for house wiring are so involved, and complicated or at least the sponsors think they are, that they would rather not borrow the money from REA at the present time.

THE CHAIRMAN: We started out on the basis of getting some customers, and I know if the wiring contracts have to go through the same process as the others, we shall never go into that business.

MR. STONE: That was the reason the Ohio installation contract did not go through. We went out to sign a contract with Minnesota-3W-Meeker, and it was my understanding that Mr. Luff or somebody would help work out the details in the field so they could get the money within a reasonable time, and could complete the house wiring on a workable basis. Whether a contract basis is suitable, or some other method for most projects, or whether the work should be done on a meterial and labor basis, will have to be decided in the field on the particular project. The program as now followed is very slow and it looks like the house wiring financing will have to be taken care of by other means than REA unless we can get it

simplified. I have sent out some sample forms to be filled in by the customers, indicating whether they are interested in wiring and/or plumbing, whether they desire financing or not, the size of the home and number of other buildings, length of excess service extensions, etc. We have asked the project sponsors to estimate the cost and send in a tabulation. On the basis of that, we try to get the allotment. After the allotment has been made, the sponsors work with the Legal Division. The details affecting installations will have to be worked out by some division -- I do not know at the present time who will do this.

THE CHAIRMAN: I am glad to see that the Legal Division has assigned all of the work to one man. I can well understand that that kind of work would swamp all of the Legal Division if every lawyer had to handle details coming in from various areas.

MR. O'CALLAGHAN: I am a little bit interested in finding out why this thing will not work. Maybe we have not found the right set-up.

THE CHAIRMAN: I do not think there is any criticism of the Legal Division.

MR. O'CALLAGHAN: I wonder if Mr. Luff, Mr. Stone and Mr. Frazer should not get a little bit closer together and possibly travel around and see what sort of set-up will work. We can draw up instruments and set anything within the bounds of the Act.

THE CHAIRMAN: I do not know that we have a man in the whole organization that I would call a wiring man.

ANSWER: We have them in Development.

THE CHAIRMAN: I mean a fellow who follows wiring straight through with the ability of a superintendent to get a job done -- all those qualities in one man that go into making a well-rounded-out man apart from the engineering side -- I mean on the commercial side to get a job done.

QUESTION: Have these field men who generally come to you found that the farmers are having any particular difficulty in securing house wiring from outside sources?

ANSWER: That is not given.

THE CHAIRMAN: Do the auditors find any demand?

MR. HANNAH: I have found no demand. I believe I have traveled in about as many sections as any of the auditors and I have found only one case in which they thought they might use it.

THE CHAIRMAN: Are there any other experiences? Are there any other auditors who have something to say?

MR. McALWEE: Yes. There are one or two instances, Iowa-9-Scott and I think out in Bellefontaine, Ohio, there was something said about financing. Were you there, Mr. Luff?

MR. LUFF: Yes, I was.

QUESTION: They were interested in it, were they not?

ANSWER: They finally went over to the FEHA. They seemed to have a better set-up.

QUESTION: They get a bunch of notes paid?

ANSWER: A cooperative does not have to endorse notes. The dealer endorses the notes.

THE CHAIRMAN: Roewe, have you had any comments from the project sponsors you have contacted?

MR. ROEWE: No, I have not. The attitude is that they are not interested.

THE CHAIRMAN: Mr. Mackay?

ANSWER: On Ohio-58-Union, they brought up the question of the amount they thought they would need. I do not believe it would be of interest as it was less than $5,000.

MR. WOOD: In my experience last summer, I did not find any great demand for wiring, just once in a while.

THE CHAIRMAN: Boyd, will you go through your crew and have them tell you what they want to do. Apparently, there is not a great demand. Will you talk with Stone and with Mr. Frazer and see if we cannot get together next week because if it is something there is no demand for, if it is taking a great deal of time in this organization that could be devoted to some other problem, we ought to abandon it -- I will recommend to the Administrator that we ought to abandon it.

We have been here five days and I shall not keep

you in an attempt to summarize the discussion. We have jumped about in the program somewhat. I think there is enough intelligence in the audience to take out of this discussion over these five days the essential things that will work.

I wanted to say a word about coordination in this work. I have interposed many remarks from time to time on that particular thing so I shall speak further about it now. I shall hold up this chart for a minute. It represents the travel of our field people during the month of December, doesn't it, Sinclair? (Indicating)

ANSWER: Yes.

THE CHAIRMAN: Now, the different colors are not significant. Our people went from Washington up into New England, out into Chicago, Minnesota, St. Paul, and Idaho. There are engineers, auditors, lawyers and development men represented there. I suspect it is not physically possible to completely coordinate all of these activities and travel but, I believe, the men who are in the field ought to know one another better, irrespective of the department they are from and certainly, certainly, if they are going out to the same place at the same time, they assuredly ought to have luncheon or dinner together.

In addition to this map, we have a daily field report. By all means, the men who go out ought to know who else is in the field. Our division heads ought to keep their own people informed regarding this. We should not have an auditor, a lawyer and an engineer out there, with none of them knowing that the others are there. Another thing, we ought to be extremely careful that no matter what we say in the field or in our letters, we are not directly discrediting anybody else in the organization.

Now, our policies are in the process of formation and there are a good many things happening and changes being effected. They do not get all the way around the first day. We do not want to discredit anybody. We want the outside to know that we are all working together. The same thing is true within the organization.

Now, the very first thing we have to remember is the statute that controls our operations. If you have not read it, read it, and read it again. The essential thing about the statute is that projects must pay out. The Administrator must sign a statement to that effect. That is the controlling factor.

Then, we begin with the Administrator's vision of what can be done. Sometimes we wonder whether a project will pay out, and whether the economic report indicates that it will. We get blinders over our eyes. We cannot remember what the Administrator says about the obstacles that have to be overcome. He said the other day he likes a hard job. In the working out of this program, we have to be extremely resourceful. The Administrator has set up all kinds of research, not only the research carried on by Mr. Adams and his crew but other research studies. He even sent a young man to Europe. He was in Sweden as well as in other countries and he spent some time with the President's Commission there. He has had Dr. Person on his staff. He is getting the technical research department interested in all manner of research that will lead to a better adaptation of equipment to electrical energy. He is working with Secretary Wallace in the Department of Agriculture on a series of studies and the development of some proving grounds throughout the United States to develop new uses and new applications of electricity. He is also interested in the broader aspects of agricultural life on the farm, realizing that broader development there will reflect itself in a very much greater demand for electricity. Those are the things he, himself, has started. He keeps them going. We have to tune ourselves in with those things, and we have to adapt our discussions inside to that broader field in which he is working. We cannot keep ourselves in too narrow a channel all of the time if we are not to throw away the result of what he has done.

It has been necessary in the course of our development to develop ourselves, if you please, with a new and inexperienced cooperative enterprise, and as I said a moment ago, maybe these are being started by the most competent and the most worth while citizens in the whole farming area, but in some cases, they are started by people who have been beaten down, who have not found the profit system to their taste or who have not been able to drag through and stay on the profit side. In some of these cases are people who did not come back as quickly as some others did after 1929. Some of us took a lot of punishment but got back some way or other. We have to work with these cooperatives. We have to work in understanding and sympathy with them. It may work out to be the salvation of this whole movement and we cannot ignore that.

On Mr. Cooke's Farm Advisory Board, there are about a half-dozen men who know about cooperatives. They come here about twice a year. I do not think we see them often enough or enough of them. I was sorry that some of our executives

did not sit in there the whole day. Some of them are business men rather than genuine leaders in the cooperative movement. Some of you heard Commissioner Saunders of the Farm Credit Administration talk within the last month. He is experienced in the cooperative movement. We engineers and lawyers have to know how best to work with these cooperatives and how to encourage them to build a successful organization that signifies this spirit that really must inspire a cooperative and keep it together. It is not the profit spirit, and that is the difficulty we have, because we are trained under the profit system. We have this business of constructing lines. We go through the allotment stage, the designing stage and then through the period of construction. We are learning now that we can make these moves a little more rapidly than we have been making them, with fewer details and get into construction more quickly. I am sure we can find a fund under the proper leadership, perhaps for two or three years, for some of these extensions, this open mortgage as Mr. O'Callaghan explained, as an intelligent answer to some of the growing needs of these cooperatives. It is in anticipation of a great need that will come within the next three or four years.

As I said the other day, this is the sixth organization with which I have been associated since I came here in 1933. I know of no single organization that has more intellectual power and moral power than this group, and I know of no group that is growing intellectually in the understanding of these problems more rapdily than this organization. It is stimulating to me to be associated with you, and it has been extremely stimulating to see how patiently you have listened to our problems and how intelligently you have responded to questions. I can only say this in closing, that without exception we have perhaps the greatest single leader in all of Washington as Administrator of this organization, a man who sees our problems clearly. If we can see with him and if our relationships inside can be directed toward the end he would achieve a little earlier than he thinks it can be achieved, I believe we shall have done our job for him, and REA will have given to the farmers in the rural areas the help they need. I do not think the utilities are going to stymie us. Ours is a public service job and we are working for the public and in the public interest. If we work along that line with the problems we have, we shall have achieved results. I thank you.

(ADJOURNMENT - 3:50 P.M.)